

International Scientific Conference

**MANAGERIAL TRENDS IN THE
DEVELOPMENT OF ENTERPRISES IN
GLOBALIZATION ERA**

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PREFACE

The 7th international scientific conference ICoM_2017 “*Managerial Trends in the Development of Enterprises in Globalization Era*” was next in a row of the international scientific conferences organized within the V4 countries, welcoming participants and experts from several foreign countries. The main attention of the international scientific conference was devoted to the presentation of the selected problems in the enterprise management with regard to the practice and theory in the 21st century. An additional goal of the conference was to provide a place for academicians and professionals with interests related to business, planning, organization and human resources issues as well as agribusiness and sustainable development.

The international scientific conference ICoM_2017 “*Managerial Trends in the Development of Enterprises in Globalization Era*” provided a setting for discussing recent developments in a wide variety of topics as follows:

1. Managerial Aspects of Internationalization of Entrepreneurship
2. Business Strategies, Planning, Organization and Management of Enterprises
3. Human, Social and Intellectual Capital in an Organization
4. Corporate Social Responsibility, Business Ethics and Sustainable Development
5. Knowledge and Innovation Management
6. Diversity Management
7. New Trends in Management and Marketing
8. Agribusiness and Sustainable Development

Submitted proceedings deals with selected problems in theory and practice and is highly recommended to scientists, academicians, researchers and representatives from the business sector.

The international scientific conference was held on June 1st – 2nd, 2017 at the Slovak University of Agriculture in Nitra, Slovakia, Faculty of Economics and Management, Department of Management and Department of Marketing and Trade in cooperation with:

- Częstochowa University of Technology, Poland, Faculty of Management,
- Mendel University in Brno, Czech Republic, Faculty of Business and Economics,
- Szent István University, Gödöllő, Hungary, Faculty of Economics and Social Sciences.

It is our pleasure to thank all participants for the contributions to the Conference program and Proceedings and fruitful discussion during the conference.

Editors

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***SESSION 1 Managerial Aspects of Internationalization of Entrepreneurship
Business Strategies, Planning, Organization and Management
of Enterprises***

Model and practical proposals for changing institutional mechanisms for conducting commodity-purchasing interventions in the grain market in Russia

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Abstract

The article presents a theoretical model of an efficient institutional system of building regulations for the commodity and purchase interventions on the basis of experience of the USA and EU countries. Based on the analysis of the institutional mechanism of stabilization of agri-environment made suggestions for corrections of formal rules regulating the food market in Russia (in the framework of the implementation of commodity-purchasing interventions).

Keywords: institutions, agro-environment, intervention measures.

JEL Classification: E32; O13; O43

1. Introduction

Stability of the institutional structure that ensures the economic growth of the agrifood sector is provided through such institution-factors as "state" and "market". Studies of the state of the agro-food market show differences in state policy at various stages of its development, which causes a wavy character of the appeal to the principles of state regulation. Such measures, while deforming the institutional environment of market agriculture, but to an insignificant degree (Gaysin, 2014, p. 11-16), (Nureyev, 2010, p. 118-120). The structural policy of the state does not in any way replace market institutions, on the contrary it creates appropriate conditions for them, aims at economic growth in the framework of achieving the goals of development of the agricultural sector. The support of agricultural institutions, despite the significant financial costs of the budget, creates the conditions for the growth of production and maintenance of social stability in society. Studies of the relationship between the state and the market in agriculture show that budgetary expenditures are justified and are applied in most developed economies of the world (Zeldner, 1997, p. 83). It is necessary to overcome the misconception about the existence of purely market relations in agriculture. Developed countries have taken the path of ensuring food security and reducing social tension in rural areas by satisfying the interests of both producers and consumers of food (Gaysin, Migunov, 2015, p. 49-54).

*In conditions of low-efficiency institutions of market regulation of sustainable economic growth in agriculture in transformational economies (including Russia), institutional mechanisms of state regulation are the most important factor of low-volatility and efficient functioning of agro-industrial production, which shows the importance of **theoretical development of these institutional practices**.*

The main institutional mechanisms of state regulation of the agrarian sector for sustainable economic growth and stability of the agrifood market in the EU and USA countries are: price regulation of agricultural products; System of preferential taxation in agriculture; Support of financial and credit resources of agricultural producers; Direct subsidization of agriculture (formulated by Nazarenko, 2007 p. 10-18). Formation of an institutional environment with

dominant market institutions and qualitative complementary institutions of state regulation will ensure both short-term and long-term economic growth in the industry. In the current contradictory conditions of agricultural production in Russia (membership in the WTO, along with the application of special restrictive measures for the import of food), it is advisable to build specific institutional mechanisms for supporting and regulating agriculture in Russia. Taking into account the increase in the amplitude of short-term fluctuations in prices and incomes in agriculture (*figure 5*); it is necessary to widely use the policy of stabilizing the situation in the food markets (the formation of intervention funds).

The purpose of this work is to formulate measures to adjust the institutional mechanisms for carrying out commodity-procurement interventions on the basis of constructing a theoretical model and analyzing it with the help of the existing system of Russian formal rules for stabilizing the agrifood market.

The main scientific assumption is the need to adjust the formal rules for regulating the food market in Russia (as part of the implementation of commodity-procurement interventions), in order to improve the effectiveness of the measures applied, on the basis of a comparison of "*a potentia ad actum*" (from theory to practice).

1.1 Literature Review

Scientific developments devoted to the regulation of the institutional mechanisms of the agrifood situation in Russia represent a wide range of research: from theoretical (Gaysin, 2014; Nureev, 2010) and scientific and practical research (Nazarenko, 2007; Bratcev, 2011) to mathematical modeling of the entire system of institutions of commodity-procurement interventions (Svetlov, 2016).

2. Data and Methods

Commodity-purchase interventions are an institutional mechanism of state regulation aimed at selling or purchasing agricultural products from the state in order to stabilize the agrifood situation and reduce the volatility of prices and incomes of agricultural producers. Stabilization operations are carried out in two directions:

- *commodity interventions* - introduction of additional volumes of food from the interventional funds ΔQ to the market, at prices below the market average ΔP . Are made with the purpose of reduction of an agiotage demand and alignment of a market conjuncture in lean years in the conditions of sharp growth of the prices for the commodity markets. The state acts as a seller of products (on the supply side).
- *purchase interventions* - the acquisition of additional volumes of food on the market for the replenishment of interventional funds ΔQ , at prices above the market average ΔP . Are made with the purpose of stabilization of incomes of farmers and prevention of their bankruptcy in high-yielding years (because of sharp decrease in prices). The state acts as a buyer of products (from the side of demand).

The use of commodity-procurement interventions leads to the formation of two food markets: the free market trade sector and the sector where the prices and the volume of food sales are determined by the Government. Intervention measures can be examined through analysis of market conditions during the conduct of commodity-purchasing transactions. For convenience, we define:

- D and S - functions of aggregate supply and demand, respectively;
- $P_0 Q_0$ - the initial situation on the market with prices P_0 and volume Q_0 ;
- $P_1 Q_1$ - the situation on the market after the stabilization operation;

- $P_1 \cdot Q_1^*$ - the volume of sales and prices in the free trade sector, after the stabilization operation;
- P_{\max} ; P_{\min} - the maximum and minimum price for the sale of this type of food, respectively;
- in the case of commodity interventions, the Government increases the amount of supply by ΔQ_S at prices below the market average ΔP_S ;
- in the case of procurement interventions, the Government replenishes the intervention funds, which increases the demand for ΔQ_D at prices above the market average of ΔP_D .

The institutional mechanism for stabilizing the agrifood situation under favorable conditions is formed on the basis of the following model of the intervention operation (described in detail in Gaysin, Migunov, 2015, p. 49-54).

1. Analysis of demand for food products:

- analysis of the dependence of food consumption on household incomes;
- analysis of the dependence of food consumption on the price;
- analysis of the export potential of domestic food.

Today's development of the information and statistical base of the food market makes it possible to construct correlation models of demand on the basis of the dependence of sales volume on the retail price, the per capita income of the population of a certain territory and the prices of other types of food that affect the consumption of this product.

The function of aggregate demand in general form can be represented as:

$$D = a_0 \times P + a_1 \times I + a_2 \times F^1 + \dots + a_n \times F^n + c, \text{ where}$$

D – volume of demand for a product, ton;

P – price for this type of product on the free market, rubles/ton;

I – per capita income of the population of a certain territory, rubles;

$F^1 \dots F^n$ – prices for other goods, rubles/ton;

a_0, \dots, a_n ; c – constants.

The specific form of the demand curve (linear, power, transformed power law) is determined by calculating the parameters of the correlation model for various forms of communication, comparing the results and selecting the best function.

The aggregate sentence function can be described through the description of a multifactorial linear function:

$$S = a_0 \times P + a_1 \times M^1 + \dots + a_n \times M^n + c, \text{ where}$$

S – volume of supply for this product, ton;

$M^1 \dots M^n$ – prices for factors of production, rubles.

Within the framework of the model with the interventions implemented, it is possible to define the function of the proposal in a different way. Use in the calculation of the minimum price, below which market participants cannot sell their products, allows you to construct the supply function through two points $[0; P_{\min}]$ и $[P_0 Q_0]$. Such market parameters allow one to investigate the effect of a stabilization operation on the basis of only the demand function, using the available statistical data for this.

2. Analysis of the current price conjuncture in the agro-food market.

The criterion for conducting commodity interventions can be considered a rise in prices above P_{\max} , which leads to an excess of the social limit of the retail price, which is determined on the basis of the subsistence minimum of the population (as in the USA). The definition of such a price can lead to tariff protection of domestic production from importers (as in the EU countries).

The criterion for conducting procurement interventions can be considered a price fall below the threshold P_{\min} , defined as the sum of the cost of production and the transport costs of delivering it to the consumer (small differences in the defined minimum in the USA and the EU).

3. Determination of the parameters of the stabilization operation ΔQ and ΔP : in the case of commodity interventions, based on the formed interventional reserves and their cost, including storage costs; In the case of procurement interventions based on budget constraints and the formation of a minimum price P_{\min} .

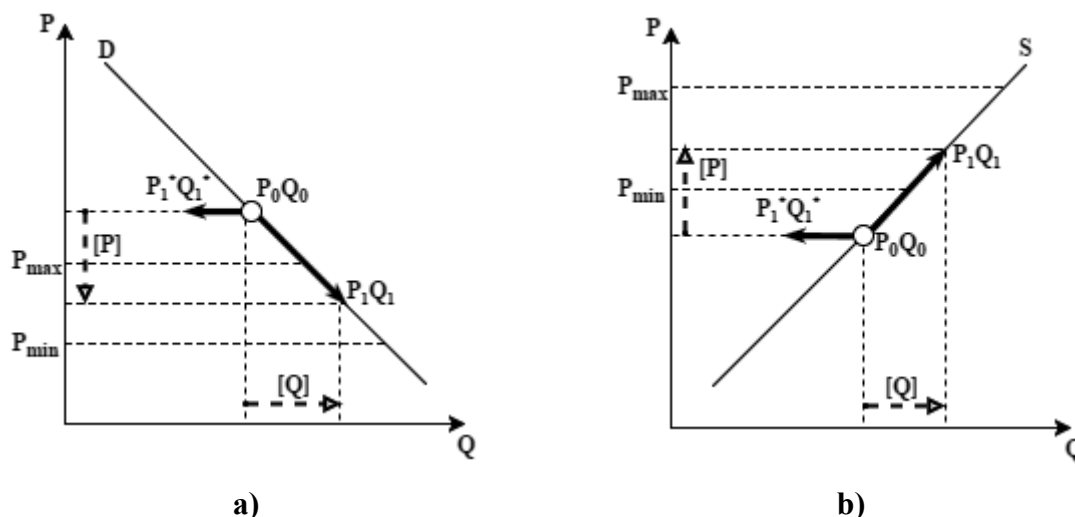
4. Calculation of the sales volume of the product on the market at the time Y_0 using the corresponding demand function defined in item 1.

5. Modeling the behavior of institutional subjects in the free market using three scenarios:

5.1 The sales price in the free trade sector does not change under the influence of the stabilization operation: $P_1^* = P_0$ (figure 1).

In the case of commodity interventions, this situation can arise if the price in the market is close to the minimum acceptable for sellers or if there is room for long-term storage of products. In the case of procurement interventions, such a situation may arise if there are barriers to entry into the state regulation sector (for example, high transaction costs of entering into contracts on the exchange or restriction in the form of bureaucratic rent).

Figure 1: Stabilization measures in the agro-food market with a fixed price in the free trade sector: a) commodity, b) procurement interventions



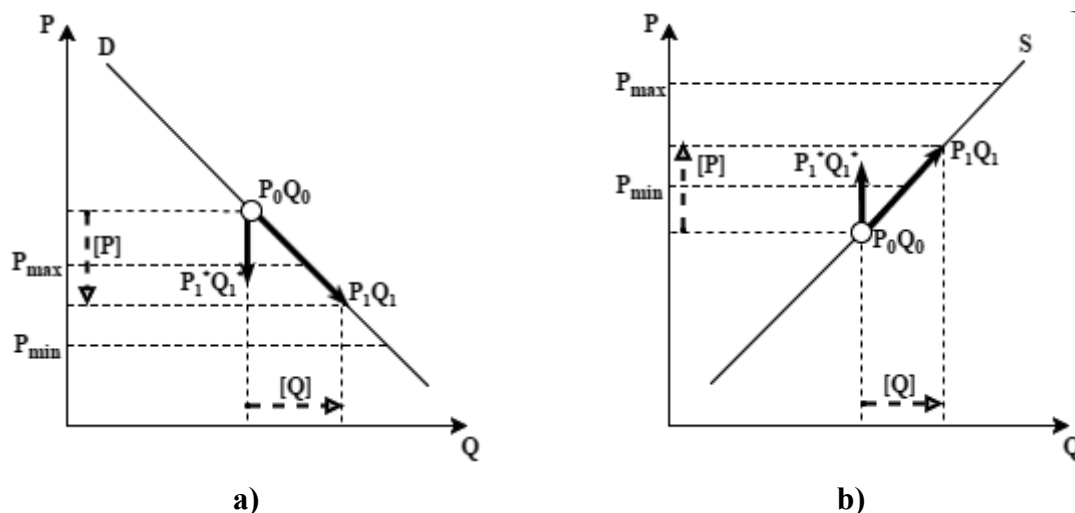
Source: Author's approach

In the case of the model shown in figure 1, there is a decrease in sales in the free market ($Q_1^* < Q_0$), with an increase in the total sales of this product ($Q_1 > Q_0$). Commodity interventions (figure 1a) lead to a reduction in prices to an acceptable level ($P_{\min} < P_1 < P_{\max} < P_0$); purchasing interventions (figure 1b) increase prices to an acceptable level ($P_0 < P_{\min} < P_1 < P_{\max}$).

5.2 The volume of sales in the free trade sector does not change under the influence of the stabilization operation $Q_1^* = Q_0$ (figure 2).

In the case of commodity interventions, this will characterize the perishable market, or a market with significant trade margins, which in any case covers the costs. In the case of procurement interventions, this situation may arise due to the isolation of regional markets, when the ongoing stabilization operation in the CFD is not capable of changing the volume of supply in the FeFD.

Figure 2: Stabilization measures in the agro-food market with unchanged volumes in the free trade sector: a) commodity, b) procurement interventions



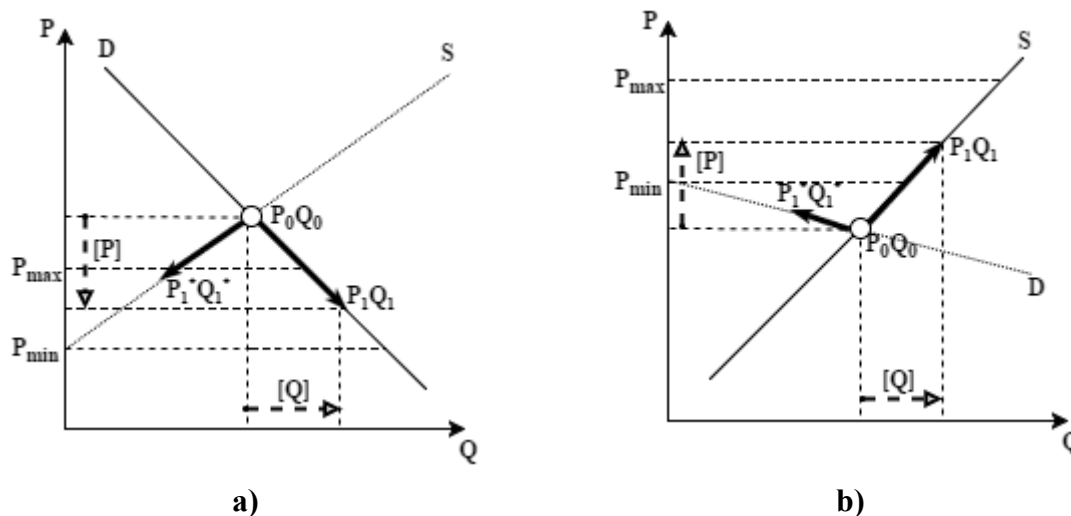
Source: Author's approach

In the case of the model shown in *fig. 2* there is a stabilization of sales volumes in the free market ($Q_1^* = Q_0$), with an increase in the total sales of this product ($Q_1 > Q_0$). The price effect is similar to the situation in the previous model (*figure 1*).

5.3 The retail price in the free trade sector varies according to a law determined by the demand and supply function (figure 3).

The general mechanism for stabilizing the impact of institutional mechanisms for state regulation of market conditions is the appearance of an additional quantity of products on the market at a cheaper price in the case of commodity interventions (*figure 3a*), which leads to a decrease in sales volumes in the free sector and pressure on prices towards their lowering; In the case of procurement interventions, the state forms additional demand in the market, which reduces the volume of sales in the free market and raises sales prices for products (*figure 3b*).

Figure 3: Stabilization measures in the agro-food market: a) commodity, b) procurement interventions



Source: Author's approach

6. Calculation of the parameters of the stabilization operation (ΔQ , ΔP), based on the criteria of the model obtained.

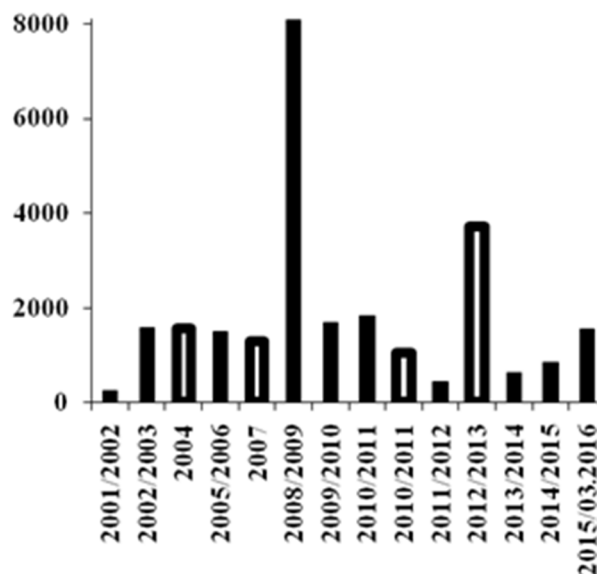
The model is based on the construction of an "ideal" institutional mechanism for stabilizing the market situation in the agro-food market, which allows:

- to smooth the volatility of price fluctuations by year and by season during the year, which leads to a sustainable income generation by agricultural producers;
- reduce the dependence of the development of the industry on the natural and climatic conditions, through the formation of interventional reserves and their consumption in lean years;
- reduce the negative manifestations of market institutions in agriculture, through the competent construction of complementary institutions of state regulation;
- smoothout the shock peaks of the agrifood situation in order to increase the forecast horizons for the development of the industry. The possibility of medium- and long-term forecasting of the agrifood situation increases the inflow of investments into the industry.

3. Results and Discussion

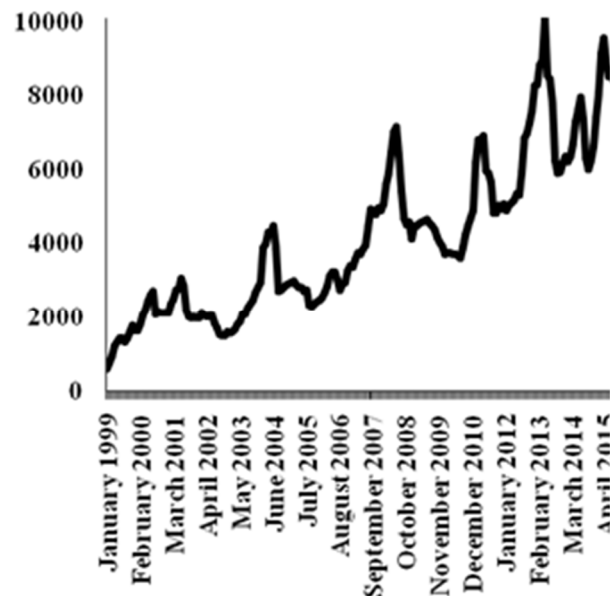
In the Russian Federation, the Government has been implementing commodity-procurement interventions to regulate the agricultural market since 2001 (Decree of the Government of the Russian Federation of 3.08.2001 №580). In 2006, with the adoption of the Federal Law, the objectives of the policy were determined in the form of stabilization of prices and incomes of agricultural producers (Federal Law No. 264-FZ of December 29, 2006). However, the general mechanism (the system of formal rules) for carrying out intervention measures was never registered. In Art 14 Federal Law at least 5 references to other legal acts, some of which change annually. The Government's stabilization policy is currently concentrated on the grain and partly dairy market.

Figure 4: Dynamics of purchasing and commodity grain crop interventions in the Russian Federation, kt



Source: Statistical data of the National Commodity Exchange

Figure 5: Average prices of cereals sold by agricultural organizations, rubles



Source: Statistical data of a single interdepartmental information and statistical system

In the period from 2001 to 2016 marketing year, 10 purchase and 4 commodity interventions were conducted in the country. The methodology for their conduct led to mixed results.

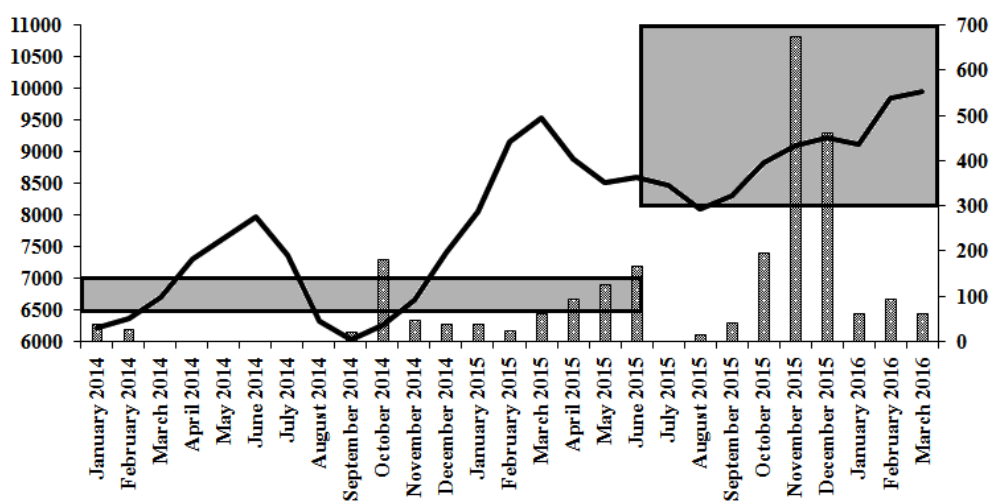
The first procurement interventions conducted in 2001 reached their goal: in the period after the bidding the prices for cereals did not fall below the established minimum level. The market took the prices of conducted trades as "signal information" and subsequently focused on them. The 2005 interventions made it possible to withdraw about 10% of the wheat of grade 3 from the market, which set a positive price trend in the market.

However, the intervention of 2002-2003 the need for a differential territorial approach to the formation of procurement prices for their implementation (*Commodity interventions in October, 2016*). The refusal to conduct government purchases in 2004 led to a one-time massive "ejection" of grain to the market and a half-fold drop in prices. In conditions of declining prices, the state entered the market with commodity interventions, which increased the "shock" conjuncture in the grain market. However, the most "characteristic" flaws in the conduct of commodity-procurement interventions were in 2007-2008.

Despite the high harvests in 2007, procurement interventions during this period were not carried out for a number of reasons. The growth of the export potential of the grain industry by 20%, the increase in world prices due to the demand for biofuels in the EU countries have formed an accelerated growth in food prices in Russia (an increase of 20-60%). In such conditions, the Government decided to conduct commodity interventions (1.3 million tons of grain were sold). Regulation of the grain market in 2007 could not stop the sharp increase (by 85%) in prices for cereals. From June to December 2008, the reverse situation occurs: a significant reduction in prices (by 42%). And only in December state intervention purchases of grain begin, continuing till June, 2008. The calculations of economists show that a competent intervention in this period would save up to 28 billion rubles in budget spending (Bratcev V., Magomedov A.-N., Taran V., Prolygin N., Shilovskaya S., 2011, p. 39).

The formation of procurement interventions in recent years leaves a lot of questions. In the period from February to September 2014, the state made no transactions in the market (*figure 6*). However, the conjuncture of the agro-food market over this period managed to go through several stages: growth until June and a seasonal summer decline. Only with the achievement of the lowest point of 6,000 rubles/ton (below the cost of production), the state began active stabilization measures. Measures to purchase food in the intervention funds allowed increasing grain prices (by 58% by March 2015). The dampening nature of grain purchases during this period is generally justified. Further seasonal price reduction was compensated by the state (a 15% drop in prices by August 2015). The increase in procurement interventions and their timely start led to an increase in grain prices by March 2016 to 9,500 rubles/ton.

Figure 6: Dynamics of procurement interventions (right scale, thousand tons) and average prices for cereals (left scale, rubles/ton)



Source: author's calculations; statistical data of a single interdepartmental information and statistical system

Institutional mechanisms for stabilizing the situation in the agrifood market in Russia do not cope with the task of ensuring the income of agricultural producers. So in *fig. 6* the areas of the cost price of the realized grain crops in the Krasnodar Territory are marked in gray. In 2014 - this area is 6500-7000 rubles per ton, in 2015 - 7900-10900 rubles per ton. The sharp increase in the cost price in 2015 is associated with currency fluctuations in the ruble exchange rate (30-50% of the structure of the cost price of grain is associated with imports).

If in the season of 2014 most manufacturers had the opportunity to make a profit, then in 2015 there is an ambiguous situation. Prices for agricultural products lie entirely in the cost of production, which, most likely, leads to a loss in most farms. At the same time, the cost of production is taken from the region with favorable conditions for large-scale grain production and with the possibilities of export supplies at prices higher than 11,000 rubles per ton (the cost price of production of Kuban wheat has increased, 2016).

The impossibility of the Ministry of Agriculture of Russia to develop a system for the full regulation of the agro-food market is explained by the lack of an information and methodological base for conducting interventional operations and gaps in legislation. Such analytical work for today is not within the competence of the Ministry: it determines the size and conducts stabilization measures; however, specific mechanisms for implementing such functions are not prescribed anywhere. All this leads to the fact that in March (Order of the Ministry of Agriculture of Russia of March 31, 2015, No. 119) each year the Ministry of

Agriculture of Russia determines the minimum intervention prices for cereals and carries out interventions during insignificant lots during the year (Ministry of Agriculture, 2015-2016). The lack of a system for monitoring and forecasting the market, clear patterns of behavior of officials in various situations on the agrifood market led to the fact that market prices are defined as EXW prices on the National Commodity Exchange. The narrowest point of the system is financial support for ongoing operations. Expenses for the formation of intervention measures are carried out at the expense of Russian Agricultural Bank. Cash flow is carried out by the chain:

- The Government of the Russian Federation transfers budget funds in the form of a contribution to the authorized capital of Russian Agricultural Bank;
- The Ministry of Agriculture forms the prices and volumes of the lot purchases and sends them to the state procurement agent United Grain Company;
- United Grain Company applies for a loan to Russian Agricultural Bank;
- Russian Agricultural Bank allocates credit funds of United Grain Company;
- United Grain Company organizes exchange trades during state procurement interventions and transfers money to the winning agricultural producer.

A long chain of cash flows leads to significant time lags between the allocation of cash and their real receipt into the accounts of agricultural producers.

The system of selection of grain storage elevators is also of low efficiency. Comparison of the levels of storage costs for grain in the intervention fund and in the state material reserve showed that the cost of storing 1 ton of grain in Rosrezerv's structures is 13-52% lower than in the structures of the Ministry of Agriculture. This is explained by the difference in the schemes for selecting custodian enterprises and the formation of a tariff for the services provided. So at a seminar in the city of Kazan representatives of the Federal Antimonopoly Service presented 3 characteristic examples of violations of the law "On competition" in the part of grain purchases and storage in the state intervention fund (Federal Antimonopoly Service, 2014, slide 14-16).

Despite the fact that the very fact of the state's appeal to such an institutional mechanism as intervention measures is positive, the specific conditions for the implementation of formal rules in Russian reality are far from perfect. The modeling of the Russian grain market shows that even the practice of establishing a broad price corridor with a prescribed model of state behavior allows, at low budget costs, to strengthen incentives for innovation and investment in this sector of agriculture (Svetlov, 2016).

In order to stabilize the prices and incomes of Russian agricultural producers, we are convinced that **the following measures** must be taken:

1. Form a model for carrying out stabilization operations and prescribe specific mechanisms for implementing the policy as a whole for the Russian Federation, for each region or larger territorial entities by a decree of the Government of the Russian Federation and the methodology of the Ministry of Agriculture.
2. Develop institutional mechanisms for determining price thresholds in specific food markets. In the case of P_{\max} , it is necessary to formulate a policy in the field of providing socially acceptable prices or to protect the domestic market. In the case of P_{\min} , it is necessary to develop an information and statistical system for determining the cost of production of certain types of food in each region.
3. Develop a monitoring system, the current situation on the grain market in the subjects of the Russian Federation: the volume of production, use, transportation of certain types of products; Emerging prices in the free food market.

4. To conduct a policy of point-in-time implementation of stabilization operations in the territories and seasons of the year in accordance with a differentiated approach to determining the prices of procurement interventions.
5. Allow the conduct of procurement interventions during the year at different prices, along with the simultaneous conduct of commodity interventions in different regions.
6. Change the system of formation of fees for storage of grain based on the positive experience of Rosrezerv: the formation of tariffs for each specific elevator and 10% of the rate of return.
7. Implement a pledge mechanism for purchases with the possibility of a repurchase, taking into account the costs of storing food. It seems likely that this measure can be prescribed in the methodology of the Ministry of Agriculture and implemented in mid-2017 (Medvedev, 2016).
8. Reduce the bureaucratic burden on participating in exchange trades (for 2016: contract for the organization of trades - 16 documents, bidding - 13 more documents).

4. Conclusion

The construction of the theoretical model and the comparison of "*a potentia ad actum*" allow us to say that the institutional mechanism of commodity-procurement interventions shows its effectiveness in reducing the volatility of prices and incomes of agricultural producers, which leads to the possibility of sustainable economic growth in the industry. Claims from manufacturers that it is necessary to primarily support exports, rather than interventions, should be cushioned by the development of other institutions of state regulation (change of forms of support, improvement of the quality of stabilization operations). Claims from consumers regarding price increases in certain years should be cushioned by the development of demand-side management systems (taking measures to increase demand from low-income citizens, expanding demand for domestic food from budget organizations).

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Farmers' risk perception and risk management strategies in Slovak agriculture

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Abstract

Managing risk is an important part of farming that consists of the processes of identification, analysis, assessment, mitigation and monitoring of agricultural risks. Within agricultural policies, various measures contribute to reducing risk for farms, either because they help to reduce the incidence of risk or mitigate its consequences on farms' income. The paper focuses on the farmers' perception of risks in agriculture, including the attitude of farmers towards risk, significance of various risk types, frequency of risk exposure, and risk management tools applied to mitigate the agricultural risk. The questionnaire survey has been used to analyse the Slovak farmers and compare the results with the similar survey provided in Hungary, Poland, Netherlands, Spain and Germany. The results might contribute to the improvement of risk management tools in EU, which has become one of the priorities of Common agricultural policy.

Keywords: agriculture, risk perception, risk management tools, questionnaire survey.

JEL Classification: Q13, Q14, Q18, G31

1. Introduction

Risks that are relevant in agriculture have different characteristics and can be classified in different ways (production risk, price risk, income risk, institutional risk, financial risk, environmental risk, human risk). They are very rarely completely independent from each other, especially when considering their impact on profit and income variability (Hardaker et al., 2015). The risk in agriculture is defined by Heifner et al. (1999) as an uncertainty that is "serious," and is often associated with the likelihood of losing money, potential injury or death, negative consequences on resources used in production, and other types of events that negatively affect the individual's welfare. Agricultural risks arise due to the uncertainties of factors having impact on the revenues of production (OECD, 2009). To face the agricultural risks means to select a preferred combination of activities with uncertain output and expected outcome to mitigate the effects of risk consequences (Miller et al., 2004).

Individual's perception of risk can highly influence their investment and business decisions. In this regard, farmers tend to use different risk management or risk avoiding strategies to minimize the influence rate. Farm size, age, innovativeness and risk aversion determine the alternative option of risk management strategy by farmers (Pennings, 2008). The identification of the sources of risk is important because it helps to choose the appropriate management strategy. Risk mitigation, coping resp. risk management is the process of selecting an appropriate strategy or combination of strategies amongst the available alternatives to decrease the impact of the risk factor on individual's business activities, financial situation, income and welfare (Miller et al., 2004). The chosen strategy is implemented to mitigate or minimize the level of risk of a particular activity. There is no universal concept for risk management, therefore the success requires consideration and comparison of several risk management tools depending on the specific conditions of farmer (Horská, Ubrežiová, 2013).

The scientific interest in the area of risk in agriculture and risk management strategies has risen in the last years. It may reflect the actual development of Common Agricultural policy (CAP) measures. The CAP 2014-2020 has clearly positioned risk management measures into rural development programme in Regulation No. 1305/2013, with the shift from the income support measures, when risk management instruments moved from the first to the second pillar. The CAP initiative in mitigation of agricultural risks has stimulated scientific research in this area (Finger, Lehmann 2012; Meuwissen et al. 2011; Kimura et al. 2010; and others). Many studies in different countries were conducted on risk perceptions and risk management in European agriculture, for example in the Netherlands, Norway, Germany, Austria or Hungary (Meuwissen, et al. 2001; Flaten, et al. 2005; Scharper et al. 2010; Pálincás, Székely 2008, Scharner et al. 2016).

The main objective of the paper is to analyse the farmers' perception of risks in agriculture, including the intensity of impact of various risk factors, and application of risk management tools to mitigate the agricultural risk.

2. Data and Methods

The intensity of impact of risk factors, and the use of risk management tools by Slovak farmers are analysed with the use of questionnaire survey. The questionnaire survey consists of closed questions that provide respondents with a fixed number of alternatives from which they can choose one or more alternatives. In the vast majority of cases, Likert scale is used, to express respondents' views on the intensity of risk exposure. The numerical scale from 1 to 7 is selected.

The target group of respondents consists of agricultural companies of primary production operating in the Slovak Republic. The questionnaire survey was conducted online, since the January 2016 till January 2017. The questionnaire survey consists of three parts:

- **General information about respondents** - this section consists of basic questions about the legal form of the company, the production orientation, the size of the agricultural land and the area (region) in which the company is located.
- **Risk perception** – intensity of impact of different risk factors on agricultural income. In this part the questions are focused on determination of the impact of selected agricultural risks on income (profit, loss).
- **Use of risk management tools** - the questions are used to find out which of the risk mitigation tools and measures are used by Slovak agricultural producers to deal with the risk in agriculture.

The results of the survey are evaluated using nonparametric tests, Kruskal – Wallis test, Mann – Whitney test.

$$H = \frac{12}{N(N+1)} \cdot \frac{\sum_{j=1}^n R_j^2}{n_j} - 3(N+1) \quad (1)$$

R_j^2 - the sum of the order of each selection group,
 n_j - number of observations in group,
 N - total sample size.

Mann-Whitney U test is the non-parametric alternative test to the independent sample t-test. It is a non-parametric test that is used to compare two sample means that come from the same population, and used to test whether two sample means are equal or not.

$$U = n_x n_y + \frac{n_x(n_x + 1)}{2} - R_x \quad (2)$$

n_x, n_y – sample size X or Y

R_x – rank of the sample size X.

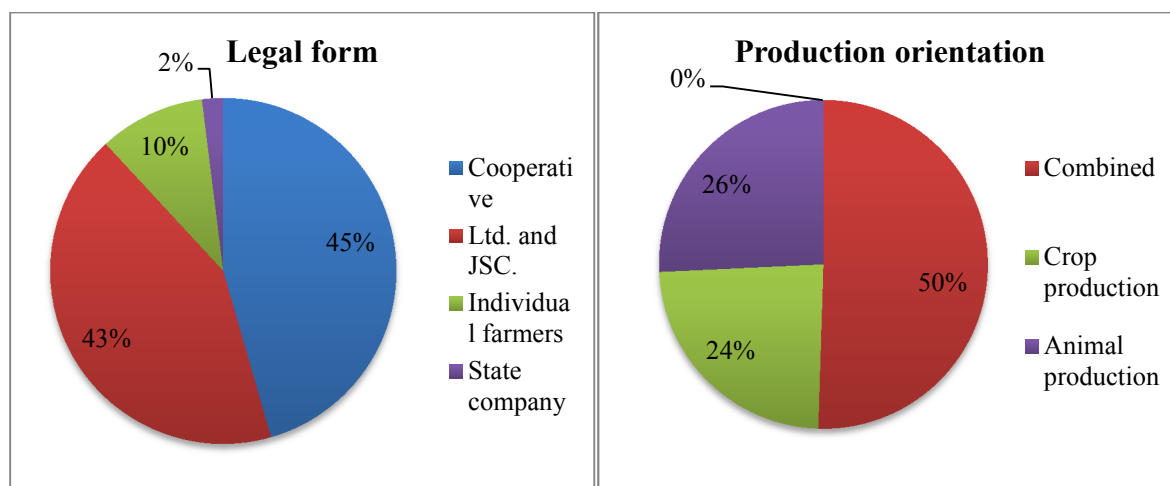
The tests are used to find the statistically significant differences in mean values for more than 2 independent samples. H_0 hypothesis assumes that there are no differences in the mean values (respondents' opinions) within the test group. Differences are tested at $\alpha = 0.05$.

- If p - value < 0.05 , we reject the H_0 hypothesis and accept alternative hypothesis H_1 that assumes that there are differences between at least one pair of mean values within the test group.
- If p - value ≥ 0.05 , the null hypothesis H_0 is accepted. It means that there are no statistically significant differences between the mean values of tested groups.

3. Results and Discussion

The questionnaire survey was offered to 640 Slovak agricultural companies, however only 101 respondents participated on the research. The 45 % of farms have legal form of a cooperative, 43 % of farms have the legal form of a joint stock company or a limited liability company, 10 % of respondents act as individual farmers and 2 % of respondents are state companies. The majority of farms have combined production orientation (plant and animal production, 50.5% of respondents) almost 24 % of farms are focused only on the crop production, and 25.7% are livestock farms (Figure 1).

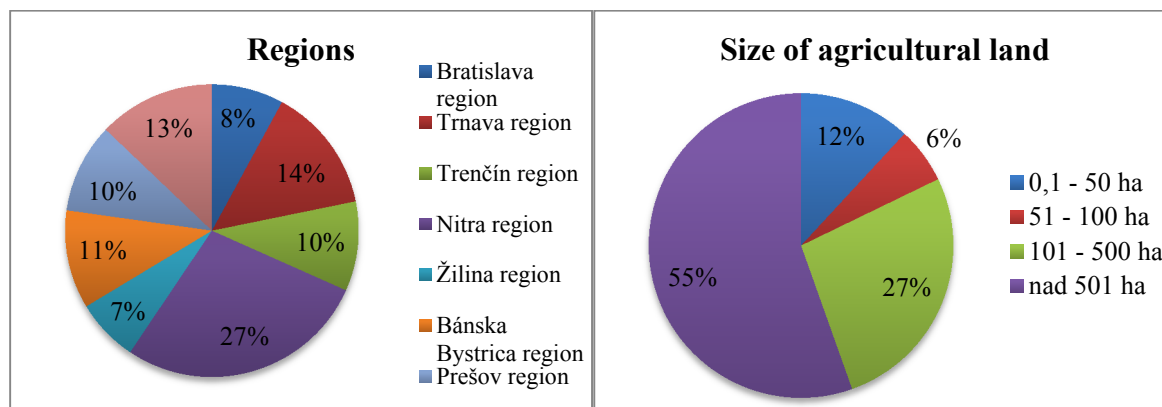
Figure 1: General information about respondents (legal form, production orientation)



Source: own processing

The farms in the tested sample are located in all 8 regions of Slovak Republic. The regional structure is shown in Figure 2. Based on the size of the agricultural land, the respondents are divided to farms operating on more than 501 hectares (55.4 %), 101-500 ha (26.7%), 51-100 ha (5.9 %) and 0.1 - 50 ha (11.9 %). The majority of companies are large farms with an area over 501 hectares. Therefore we decided to test the statistically significant differences between 2 groups of farms – operating on more than 500 ha, and less than 500 ha (44.6). Moreover, we tested the statistically significant differences between groups divided by the production orientation. A sample of survey can be considered as large enough to represent companies of different legal forms and sizes, operating in different regions, with preference for combined or specified agricultural production.

Figure 2: General information about respondents (regions, size of agricultural land)



Source: own processing

After the general information about respondents, the questions included several risk sources which could be rated from 1 – 7 (without impact – very significant impact) based on the intensity of impact on agricultural income. The rating from 1 – 3 describes only low impact of risk factor, 3 – 5 moderate impact of risk factor, and 5 – 7 a significant impact of risk factors. Respondents rated the following risk sources: *weather and natural changes, animal and plant diseases, output price changes, input price changes, marketing/sales difficulties, indebtedness, political changes, technological changes, environmental risks, human risks*.

From the selected risk sources, affecting the economic performance of the agricultural companies, the respondents consider the output price changes (changes in the prices of agricultural products on the market), and input price changes (changes in production costs, labour costs, land rents, fodder prices, fertilizer prices, etc.) to have the greatest impact. Respondents also consider weather and natural changes to have very high impact on agricultural income (5.63 on average), as well as marketing/sale difficulties (5.22), and animal and plant diseases (5.21). The rating of farmers undoubtedly reflects the development of Slovak agricultural sector in the previous years, that has been characterised by increased price volatility, very unstable weather (floods, hailstorms, rainfall, or extreme drought), lower revenues from the sale of own products due to decrease in gross agricultural production in current prices, with considerable decrease in animal production, as well as plant production. In the opinion of farmers, the lowest level of impact with the average value of 3.81, indicating moderate impact, have environmental risks (costs of water / soil pollution, waste disposal, costs of environmental damage, etc.).

Figure 3: Intensity of impact of risk factors (scale 1 – 7)

Source: own processing

The questionnaire survey results are compared with the study of authors Palinkas et al. (2008) who applied a similar survey in the Hungary, Poland, Netherlands, Spain and Germany. From the comparison can be concluded that the Slovak respondents consider the risk factors output price changes, input price changes, marketing/sales problems, political changes and technological changes to have greater impact on the agricultural impact than in the other countries. The difference is obvious mainly when rating the risk factor input price changes. The Slovak respondents rated the factor to have significant impact on their income, while the rest of the countries perceive it only as a risk factor with moderate or low impact. The risk of weather and natural changes is perceived more significantly by respondents from Poland, Hungary and Spain. Somewhat minor meanings refer to the risk factor for participants in the survey of the Netherlands and Germany, although there is only a very small difference between the average rating of the respondents. Animal and plant diseases is attributed as having large impact on agricultural income in Poland and the Netherlands, while the same applies to political measures in Germany, and to marketing difficulties in Hungary.

Table 1: Comparison of risk perception in different countries

	<i>Hungary</i>	<i>Poland</i>	<i>Netherlands</i>	<i>Spain</i>	<i>Germany</i>	<i>Slovak Republic</i>
Weather and natural changes	6,24	6,41	5,06	5,74	5,41	5,63
Animal and plant disease	4,91	5,19	5,98	3,36	3,35	5,21
Output price changes	5,68	5,55	5,24	5,48	5,35	5,95
Marketing/sales problems	5,06	4,05	4,69	4,39	3,95	5,22
Input price changes	3,98	2,21	3,27	3,75	3,47	5,64
Indebtedness	2,63	3,42	4,52	2,97	3,04	4,06
Political changes	4,15	3,31	4,89	4,07	5,23	4,92
Technological changes	4,22	3,64	4,31	3,62	4,02	4,46

Source: own processing, Palinkas et al. (2008)

However, it is important to note that the questionnaire survey of Palinkas et al. was carried out in 2008. The development of agricultural sector in recent years may explain the differences in respondents' opinions (Table 1).

For each risk factor were stated the hypotheses (H_0 , H_1) about statically significant differences from the point of production orientation and size of utilized agricultural area (UAA). H_0 hypothesis assumes that there is no difference in perception of intensity of risk factor between different production orientation (plan, animal, combined), or size of UAA (0 – 500 ha, more than 500). The rejection of H_0 hypothesis ($p\text{-value} < 0.05$) leads to the acceptance of H_1 alternative hypothesis. The results of all statistical tests are summarized in table 2.

Table 2: Statistically significant differences of perceived intensity of risk factor

Risk factor	P - value		Hypotheses	
	Production orientation	Size of UAA	Production orientation	Size of UAA
Weather and natural changes	0,000	0,010	H₁	H₁
Animal and plant diseases	0,330	0,947	H_0	H_0
Output price changes	0,364	0,065	H_0	H_0
Input price changes	0,916	0,584	H_0	H_0
Marketing/Sales problems	0,156	0,416	H_0	H_0
Indebtedness	0,156	0,930	H_0	H_0
Political changes	0,406	0,033	H_0	H₁
Technological changes	0,195	0,268	H_0	H_0
Human risks	0,878	0,432	H_0	H_0
Environmental risks	0,050	0,015	H₁	H₁

Source: own processing

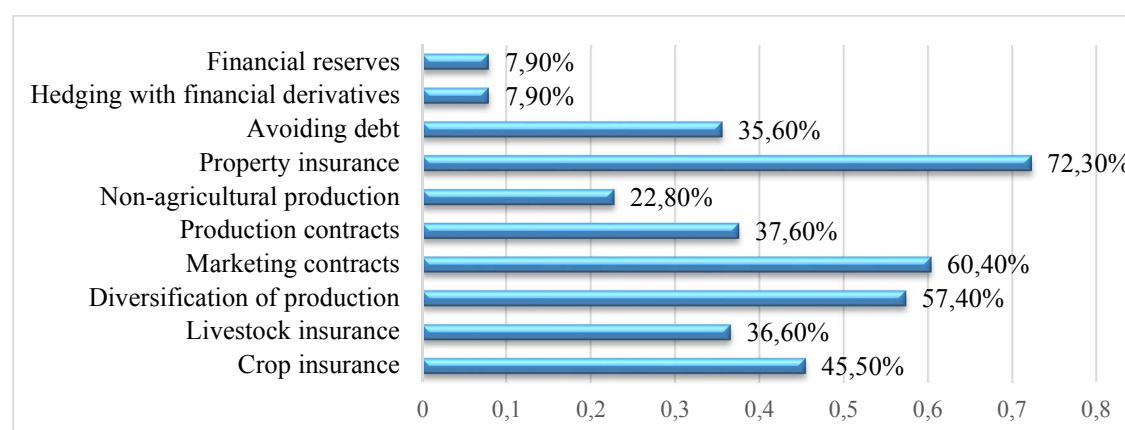
From the results of Kruskal – Wallis test, or Man – Whitney test, the statistically significant differences of intensity of impact of risk factor *weather and natural changes* were proved between different groups of production orientation, as well as size of the UAA. We can conclude that companies oriented on crop production perceive the impact of weather fluctuations on the agricultural income more intensively than companies with animal production. The statistically significant difference in perception of the risk factor exist also between companies with combined production and animal production. The results of test ($p\text{-value} = 0.381$) means there is no statistically significant difference in perception of risk factor between companies oriented on crop production and combined production. The p - value (0,010) less than 0,05 also confirms the statistically significant difference of intensity of risk factor impact between agricultural companies producing on more than 501 hectares of agricultural land and companies producing on 0,1 - 500 ha of agricultural land. Farms with an area more than 501 ha consider the impact of risk of weather and natural changes to have greater impact on the agricultural income. The results of test are in accordance with the economic theory that the crop oriented farms with large area of UAA are very sensitive to weather changes, which have in recent years caused the deterioration of production and decreased agricultural income.

Political risk (related to changes in government regulations, tax laws, legislation, changes in financial support and subsidies and other policy measures) is perceived as a factor with higher intensity of impact on farms operating on less than 500 ha. The statically significant difference exists between groups divided based on the size of UAA, however there is no difference in perception from the point of production orientation.

A statistically significant difference in the intensity of the impact of environmental risks is also proved. Farms with an area of more than 501 hectares, focusing on crop production or combined production, perceive environmental risks more intensively. There was no statistically significant difference in the intensity of impact of risk factors: animal and plant diseases, output price changes, input price changes, marketing/sales problems, company indebtedness, technological changes and the human risks.

The next part of our survey was focused on the risk management tools used by farmers to mitigate the agricultural risks. The answers of Slovak respondents were compared with the results in other EU countries (Hungary, Poland, Netherlands, Spain and Germany). The summarisation of results is presented in Table 3 and Figure 4.

Figure 4: The application of risk management (mitigation) tools



Source: own processing

The property insurance (72.3%), including insurance of buildings, machinery, agricultural technology, was indicated as risk management tool applied by the high percentage of farmers in Slovak Republic. However, the crop and livestock insurance is used by much lower number of survey respondents (45.5% and 36.6%). To the often used risk management tools belong the marketing contracts and diversification of production. In the marketing contracts the price and quantity of purchased agricultural commodities are agreed even before the end of the production process. Production contracts that give the buyer the right to control and manage the agricultural production process are used by smaller percentage of respondents (37.6%). Mostly, respondents diversify their agricultural production (57.4%) with the objective to distribute the risk to smaller parts. Non-agricultural activities are carried out by 22.8% of the respondents of the questionnaire survey. The results show that 43.6% of respondents spend their effort to minimize costs, and focus on the agricultural production with low input costs. 35.6% of respondents prefer low indebtedness of company and avoid raising capital by debt securities or using bank loans. The risk mitigation tool with the lowest percentage of usage is trading on the financial markets (option trading, futures) and creating financial reserves to cover potential future unexpected costs.

Table 3: Use of risk management tools in agriculture, comparison of countries (%)

	<i>Hungary</i>	<i>Poland</i>	<i>Netherlands</i>	<i>Spain</i>	<i>Germany</i>	<i>Slovak Republic</i>
Crop insurance	21,5	14,1	30,5	59,2	68,7	45,5
Livestock insurance	4,1	6,8	37,2	36,6	42,8	36,6

Diversification of production	23,1	33,5	11,5	18,8	28,4	57,4
Marketing contracts	38, 5	35,4	18,6	12,6	49,3	60,4
Production contracts	15,9	16,0	20,8	5,8	16,4	37,6
Non-agricultural production	4,1	1,9	6,2	5,8	49,8	22,8
Property insurance	41,5	67,5	66,8	29,8	75,1	72,3
Vertical integration	3,6	5,8	4,4	12,6	7,0	-
Avoiding debt	37,9	40,3	38,1	36,6	31,3	35,6
Hedging with financial derivatives	1,5	2,9	1,3	1,0	5,0	7,9
Financial reserves	40,5	51,5	22,6	22,5	61,2	7,9

Source: own processing Palinkas et al. (2008)

The range of instruments applied by farmers to manage risks related to agriculture show that property insurance, crop insurance and livestock production is widespread in all countries. Crop insurance is used by the vast majority of respondents from Germany and Spain. Respondents from the Slovak Republic are less focused on livestock insurance than the Dutch and German farmers, but the percentage (36.6%) is several times larger than the use of livestock insurance products in Hungary and Poland. It is important to note that the authors' study was carried out in 2008, when the products of agricultural insurance offered in Hungary and Poland could be less developed than nowadays. The great difference between respondents' answers is evident in the diversification of production. While 57.4% of respondents from Slovak Republic diversify their production, in other countries the percentage of the use of this risk management tool is relatively low. Agricultural production in the Netherlands (11.5%) and Spain (18.8%) is poorly diversified and more specialized in individual primary production areas. Marketing contracts are rarely used to ensure sales in the Netherlands and Spain, however almost third of respondents from Hungary and Poland use this risk mitigation tool. Clearly the highest percentage of usage of the instrument is in SR (60.4%). Similarly, the use of production contracts is more frequent among respondents from Slovak Republic than in other countries, although there are smaller differences between studied samples. The non-agricultural production is used by approximately half of respondents from Germany, representing almost 2-times more farmers than in Slovak Republic. Respondents from Slovak Republic are significantly lagging behind other countries when creating financial reserves (other than mandatory). The percentage (7.9%) is very low compared to Germany (61.2%) or Poland (51.5%).

4. Conclusion

The paper analyses the farmers' perception of agricultural risks and the use of risk management tools to mitigate their impact on business activities and income of agricultural companies in primary sector. On the questionnaire survey used for the analysis participated 101 agricultural companies of different size, production orientation, legal forms, located in all 8 regions of Slovak Republic. The results of the survey demonstrate that to the factors with the highest impact on agricultural income belong the output price changes, input price changes, weather and natural changes, animal and plant diseases or marketing/sales difficulties. The average values of rating show that factor having moderate impact on agricultural income involve technological changes, political changes, indebtedness and human risks. None of selected risk sources has been considered as a factor with on low impact. It supports the general opinion that the agricultural risks have significant impact on production process and income, therefore

should be prevented or mitigated by the use of risk management tools. From the comparison of results of Slovak respondents with the results of survey in Hungary, Poland, Netherlands, Spain and Germany from 2008 is obvious that the perceived intensity of impact of risk factors has increased. The Slovak respondents consider the risk factors output price changes, input price changes, marketing/sales problems, political changes and technological changes to have greater impact on the agricultural impact than in the other countries. The difference is obvious mainly when rating the risk factor input price changes. The results may reflect the development in agricultural sector in recent years characterised by increased price volatility and very often weather changes.

In the paper we tested the statistically significant differences in intensity of impact of selected risk factors from the point of production orientation of companies and size of utilized agricultural area. The statistically significant differences in perception of weather and natural changes, and environmental risks have been proved from the point of production orientation. The companies oriented on crop production and combined production perceive the impact of weather fluctuations, as well as environmental risks on the agricultural income more intensively than companies with animal production. From the point of size of UAA, the statistically significant differences in intensity of impact of weather and natural changes, political changes and environmental risks have been proved. Farms with an area more than 501 ha consider the impact of risk of weather and natural changes, and environmental risks to have greater impact on the agricultural income. Political changes are perceived as a factor with higher intensity of impact on farms operating on less than 500 ha.

In the last part of the survey we analysed the use of risk management tools and compared the results of Slovak respondents with other countries. The majority of Slovak respondents use the property insurance, marketing contracts and diversification of production as a risk management tools to mitigate or prevent the risks. However only low percentage of farmers hedges against the risk with the use of financial derivatives, or create financial reserves to cover unexpected losses. The great difference between respondents' answers is evident in the diversification of production. While 57.4% of respondents from Slovak Republic diversify their production, in other countries the percentage of the use of this risk management tool is relatively low.

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The Procedure of Collective Dispute Resolution as a Tool of Conflict Management in Polish Labour Relations: Theoretical Basis and Practical Applications

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Abstract

Conflict between employees and employers is integral part of functioning of every company and institution where work relations are based on labour law. Presented paper will discuss the role of Collective Disputes Procedure in Poland – its history, role and planned changes. The peaceful labour relation is important aspect of management in company however conflict in this relations is inevitable. That is why procedures of its resolution became a part of collective labour law. First part of the paper is focused on theoretical aspect of Industrial Relation in Poland but second part is based on cases of collective disputes in Polish industry and public institutions where the author was a mediator.

Keywords: *Industrial Relations, Collective Disputes Resolution, Labour Market.*

JEL Classification: *D74, J52, J53, M12, M54*

1. Introduction

Conflicts between employees represented by labour unions and employers were regulated by Collective Labour Dispute Resolution Act of 1991 (Bobrowicz, 2004), which indicated mediation as a phase of this process. Secondly, the mediation was extended to other areas, i.e. economic disputes (Czarnecka-Działuk & Wójcik 1999), criminal law and family law (Gójska 2009) as well as social law (Lewicka-Zelent & Grudziwska, 2015). Each type of mediation existing in Polish legislation has a rich bibliography (Zienkiewicz, 2007; Kalisz & Zienkiewicz, 2014). Polish solutions are largely based on experiences from Western Europe and USA, where one can find rich subject literature (Chaison, 2012).

The institution of mediation in collective disputes has been set up to deal effectively with conflicts between employers and employees represented by labour unions. The procedure is called a collective dispute, as the interests of employees are represented collectively rather than individually. The process of solving such a dispute consists of several stages and the most general outline is formed as follows:

Stage I - formulation and presentation of claims, labour unions present their demands to the employer, who must address them within a certain time limit. If claims are accepted, the dispute is over.

Stage II - bilateral negotiations, where the parties try to work out an agreement. If bilateral negotiations fail, the parties draw up a discrepancy protocol and move on to the next stage.

Stage III - Mediation. The parties are required to ask a mediator for assistance. If mediation fails to reach agreement, labour unions may move on to the next stage.

Stage IV - strike or an arbitration panel. Because arbitration panel verdict is not binding, in practice the parties rarely use this option. When mediation fails, it is most likely labour unions will go on strike. In order to use this method of conflicts resolution, additional conditions must be met, for example, labour union must conduct a referendum on strike among the crew.

It is worth to stress that mediations in collective disputes are the only obligatory ones. All other types of mediation are voluntary. In different situations parties may use this form of conflict resolution, but they may also go to court or use another form of arbitration. It looks differently in a collective dispute. This has certain consequences, for example, actors are not always convinced of this form of conflict resolution. The second specific feature of mediation in collective disputes is that labour unions are the only party to initiate. Employer cannot commence a collective dispute. This is justified in the essence of the relationship between employers and employees, namely employers usually have stronger bargaining power. It is worth remembering this fact distinguishes mediation in collective disputes among the other types of mediations.

The limited catalogue of cases that may be the subject of a collective dispute is an additional distinctive feature of mediation between labour unions and employers. The catalogue consists of wages, working conditions, such as health and safety and labour union freedoms. In practice wages are the most common subject of collective disputes.

Anyone chosen by both parties to the conflict can be a mediator in a collective dispute. Parties may select a mediator from a list issued by the Minister of Family, Labour and Social Policy. The list gives credibility to mediators, but it is not a certificate which restricts access to mediation to any other people. It facilitates seeking a mediator for the disputed parties. Recruitment process for the list is a separate issue and it is beyond the scope of this study.

Parties to the collective dispute may refer to the Department of Social Dialogue to designate a mediator, but they may also find the right person without the agency of the Ministry. Mediator may be indicated by both employer and labour union.

It is worth to emphasize that mediation can be carried out in all organizations where the Dispute Resolution Act applies, therefore, these may also be public institutions, such as hospitals, social welfare homes, schools, etc. On the other hand, mediations cannot be carried out in institutions such as police, military or public administration. These institutions have separate procedures for resolving employee conflicts. (Kucharski, 2012: 86).

2. Role of a mediator in a collective dispute

For the mediator, the first source of information about a dispute is the discrepancies protocol. Sometimes this is a laconic document stating in what cases the parties have so far been unable to reach an agreement in a few points and what are the differences, for example attitude towards wages. However, the mediator obtains most information during conversation with the parties. The so-called "entering" into the dispute takes a long time. Usually the parties provide the mediator with all the documentation of the dispute, consisting of a number of letters they have sent to each other over a long period of time. Hearing the parties and getting to know the documentation requires a lot of time.

Sometimes the arrival of a mediator is associated with high hopes, what can be especially observed in labour unions. It often happens in situations where the mediator is appointed by the Minister of the Family, Labour and Social Policy. The parties treat him as a civil servant who has the right to settle the dispute, or at least has some authority to indicate "who is right", while the mediator is working entirely on his own, mediating in fee-for-task agreement or being self-employed. So the one has no power in the relationship with the disputed parties nor the resources to distribute.

Thus, at first the mediator must define his role to the parties and conclude a type of psychological contract, where on one hand he declares to respect the impartiality and neutrality

of the parties, and on the other hand, indicates he will follow these rules himself. The thing is extremely difficult, as the parties can blame the mediator for the lack of these attributes anytime. 'The rejection of the opposing party candidate for a mediator is easier as the mediator is required to give the guarantee of being impartial, which is almost a divine attribute. It is very difficult to prove and very easily undermine: even the very fact of presenting a candidate by one party, casts a negative light on the mediator seen by another party.' (Rychłowski & Rychłowska, 2008: 105).

To summarize this, the process of mediation in a collective dispute can be described as follows:

1. Choosing the mediator. Labour unions request the Department of Social Dialogue to nominate a mediator and send the discrepancies protocol for this purpose. If the content of a protocol differs from the terms of the collective disputes according to the Act, the ministry refuses to designate a mediator. The parties may also choose a mediator without the agency of the ministry, whether he is on the list of mediators or not. Regardless of the way of choosing the mediator, both parties must agree for the person. If the parties do not reach an agreement on choosing a mediator, at the request of one of the parties, the ministry appoints a person from List of Mediators.

One of the conditions to designate a mediator is to draw up a discrepancies protocol. Sometimes parties cannot present such a document to the Department of Social Dialogue. This is mainly due to an employer who does not want to start mediation and avoids signing the document. However an employer must present an official response to labour unions in writing, where he specifies his position in the collective dispute. In such a situation, the Department of Social Dialogue may recognize the views of the parties presented in separate documents as the basis for designating a mediator on the basis of the Act.

2. After a prior consent the designated mediator acquires the discrepancy protocol that he receives either from the Ministry or directly from one of the parties and contacts the employer and labour union representatives to determine the date of commencing the mediation.

Because of law the collective can only be initiated by labour unions, they most often propose a mediator to the employer, as well as report it to the ministry. It is a less common practice, the mediator is proposed by an employer, but such cases also happen.

3. First contact of a mediator with the parties to the conflict usually takes place in the premises of the company. However, there are exceptions to this rule. During this phase, the mediator becomes acquainted with the views of the parties, which are specified in the protocol of discrepancies. Mediator also agrees to the amount of his fee (only the lower limit is determined by the ordinance of the Minister of Family, Labour and Social Policy) and signs a contract with the parties to lead the mediation. The latter circumstances do not belong to the merits of the dispute however they fundamentally influence the initiation of the process of mediation.

4. Tripartite talks. After preliminary explanations the mediator invites the parties to direct talks or may offer them talks without a direct contact, where he would mediate. He also has a chance to use an indirect strategy that includes face-to-face conversations as well as one-text conversations. Regardless of the mediation type chosen at this stage, the mediator informs the parties of the merits of the mediation procedure and his role in the process.

5. Agreement, in the negotiating literature referred to as "closing a deal" (Karras, 1987). At this stage, the key task of the mediator is to identify the area of possible agreement as well as to capture the moment when the parties are ready to accept it. This task is very difficult as the parties are mostly only partially satisfied with the results of the mediation and still hope to achieve more. On one hand, the mediator should suggest the parties to accept the conditions he considers best in these circumstances on the basis of his own knowledge, but on the other hand

he must remember that the parties themselves decide whether to accept or reject the agreement and take full responsibility for it. BATNA - Best Alternative to a Negotiated Agreement is a good tool that a mediator can use in this phase (Fisher & Ury, 1991). To use BATNA is to provide the parties with an alternative to a negotiated agreement, namely the termination of mediation by the discrepancy protocol, which gives labour unions the opportunity to seek arbitration or strike procedures. Even if labour unions do not intend to use these opportunity, an open dispute remains that needs to be resolved at a later stage. Employers are generally well-informed about the mood among employees and may be more or less able to estimate the danger of a strike. Labour unions are usually aware of that fact.

3. Role of mediator in collective disputes

Literature on this aspect of the functioning of mediation is extremely rich and diverse. Discussions even concern such an indisputable issue as neutrality of the mediator.

In general, the following elements of the mediator's role can be listed:

- encouraging the exchange of information
- introducing new information
- helping the parties to understand each other's points of view
- informing the parties they interests have been understood
- supporting the expression of emotions at a productive level
- work on differences in perception and differences of interests between negotiators
- assistance given to the parties in a realistic assessment of the alternatives of the negotiated agreement
- encouraging flexibility of attitude
- shifting the focus from the past to the future
- stimulating the parties to present creative solutions
- Indicate parties the interests that they do not want to disclose to each other (often at separate meetings)
- implementing solutions that address fundamental interests of both the parties to the conflict

(Goldberg, Sander, Rogers & Cole, 2003: 112).

The above characteristic of mediator's role refers to almost all mediations. By limiting the role of mediator to collective disputes, the following features can be listed:

- role of the facilitator, necessary as each collective dispute generates a personal conflict area (It is extremely rare for labour unions to perceive a collective dispute as a labour union conflict with a company, as a legal entity. On a contrary employers usually deny that a conflict with labour unions is a conflict with employees. A collective dispute is perceived not as a conflict of objective interests but as a conflict conditioned by wrong choices or even by acting in bad faith).
- role of the consultant of the parties and the author (or at least the editor) of the agreement draft,
- an alibi-guarantor, needed by the negotiating team to justify a compromise attitude towards their mandataries (Rychłowski & Rychłowska, 2008: 114).

4. Conclusions

Concentrating on the effectiveness of a mediator based on empirical studies (Cichobłaziński, 2010), both experimental and case-based, it should be indicated that the factors determining effectiveness can be divided into two types: situational - concerning the characteristics of the

dispute, which are 'given' to the mediator as well as the ones the mediator can influence. Namely, this is about mediator's techniques and tactics. As far as situational factors are concerned, the most important feature of a conflict that conducts to a constructive solution is the level of the cooperative motif that implies the actors' orientation to cooperation. Cooperation, in turn, depends on resources distribution. Generally speaking, parties are able to overcome even a high level of resentment and reach an agreement in a the violent conflict. This may prove rationality of the parties to the dispute. Another observation that can be presented on the basis of the conducted research is the superiority of the direct mediation over indirect ones (so-called 'shuttle mediations') irrespectively of situational variables such as the degree of reluctance. Whether the parties want to cooperate with each other and whether they see an opportunity to reach an agreement, which affects the level of reluctance, direct conversations are most effective. It happens even when the level of reluctance is high and the separation of parties to the conflict seems to be an effective solution.

As to the functioning of the law governing the collective disputes resolution, it should be stated that mediation is an important element in resolving conflicts between employers and labour unions. One could ask a question 'Why does the state enter the relationship between the two most important social actors on the labour market in the free market economy?'. Can't we leave the actors to solve the problem themselves? It seems the introduction of rules for collective disputes resolution civilises them significantly, essentially affecting the maintenance of social peace between employers and labour unions. This article is not intended to consider the advantages and disadvantages of the current Act governing these issues.

It should be noted that after about 19 years of operation the Act, mediation met the expectations and mediators in the vast majority perform their role well. The list of mediators created by the Ministry of Family, Labour and Social Policy proved it utility, facilitating the search for people who can lead the mediation. In order to improve the quality of services provided by mediators, they created the Association of Mediators from the List of the Minister of the Family, Labour and Social Policy which is a successor of the Polish Mediators Association.

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Practical experience of the international business management

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Abstract

The aim of this contribution is a case-study presentation how a unique Slovak enterprise entered the Ukrainian market through the privatization of a domestic company with several thousand employees in the mid-90s of the 20th century. It was one of the first privatizations of a big state enterprise with strategic importance by a foreign company. There are being analyzed more than 20 years of progress and development of this company. It describes multicultural differences that have reflected in the management, administration, service activities and manufacturing professions which Slovak management had to face not only from the beginning, but also afterwards during the successful restructuring and stabilizing of the new Ukrainian companies incorporated into the Slovak holding. This paper reports about this experience and discusses the organization and management of business processes in an international holding company of a B2B-type with the majority of Slovak capital in Ukraine. The process of setting a competitive company in the transformational economic environment of Ukraine is explained in the context regarding to developments and trends in the domestic and international environment.

Keywords: international management, multiculturalism, business, Slovak Republic, Ukraine

JEL Classification: F21, F23, G34, L26

1. Introduction

The phenomenon of globalization manifests itself directly or indirectly in all aspects of society, but its history also shows that the basic importance of its development has two dimensions. The first is a breakthrough in the technological way of production, exchange and information communication, which create the material assumptions and means of globalization. The second represents the variety of socio-economic forms through which the globalization processes are realized. Naturally, microeconomic processes such as the expansion of business entities into international markets here belong (Baláž, 2010).

The fundamental political, social and economic changes in Europe at the end of the eighties were continually transferred to the economy at the macro level and the micro level of individual countries and business entities, which naturally reflected in fundamental shifts in international business. Slovak Republic was also part of this movement and underwent enormous changes in the political, social and economic spheres. Last but not least, the processes of integration into international structures and expansion to foreign markets were involved. The transformation process involved the revolutionary changes that created the foundations of the new society.

The processes of globalization have not been and are not homogeneous even in Europe, because the level of development and quality of the areas in the different countries of Europe is very different.

This is due to:

- the different size of territory and population,
- historical, political, economic and cultural development,
- a different natural raw material wealth,
- different levels of scientific, technical and educational development,
- a non-uniform system of country management and the selection of wholly competent leaders and managers for governance in that country (Porvazník, 2014).

1.1 Case Study - Establishment and development of a joint venture in the Ukraine

1.1.1 Historical context of the creation and development of foreign trade

During the transformation process, new enterprises were created at the same time as the restructuring of the state-owned enterprises.

The velvet revolution in November 1989, and the consequences it brought, meant great changes for businesses as well as for organizing and managing of trade. Also for Chemosvit (company consists of a group of companies involved in the production, conversion and sales of flexible films for the packaging and for the electrotechnical industry, production and sales of plastics, polypropylene yarn and machinery. Manufacturing sites are located in Luck, Ukraine and in Tervakoski, Finland), and its business activity was a milestone, as foreign sales could not have been realized exclusively through monopolies via the Foreign Trade Organization (PZO), but Chemosvit could have organized it according to its own decision. It was time for the enterprise to penetrate by its own power directly and freely to markets where the company was already indirectly selling through the PZO, respectively later using middlemen and at the same time the time has come to penetrate to new markets, the use of new entities and of the creation of their own business strategy and methods. The business department of the company when it entered the foreign market started without practical foreign-trade experience and knowledge, because it used before PZO services.

In the company was trade first decentralized by individual production divisions. Each commodity had its own organizational structure of sales and marketing: management, head office, production marketing, domestic sales, foreign sales, and order processing. Decentralized sales showed an increasing amount of deficiencies after a short time. In particular, it did not jointly appear to customers as a Chemosvit brand. One customer was interested in different commodities (mainly a film program) and had to visit more departments in the company, negotiate with several traders, and have to sign a contract separately with each department. It was inconvenient for customers, often confusing. At that time, the company was supplying packaging materials for multinational companies that had centralized purchasing activities. Another disadvantage was that individual departments faced themselves as competitors. In the economic assessment of the department and the mutual comparison of economic results gained a sign of negative competition, i.e. departments literally stole customers from each other. Such a sales organization has been long unsustainable.

The organizational structure of commodity-oriented sales was in contradiction with a customer-driven company and therefore the company decided in 1994 to return to a centralized form of sales that included all the products produce in Chemosvit and through foreign middlemen the company intensively gained information and knowledge about individual foreign markets, such as the laws of the country, taxes, customs, risks with currency rates, but also shopping habits, culture and language. Slovak sales representatives of Chemosvit quickly developed business skills and the company was able to create first relationships with the customer, but still often through individual foreign middlemen but without the participation of domestic PZO.

Middlemen had good knowledge of a particular foreign market and its specifics, but their know-how was not at the required level. They represented more companies with the same commodities and the disadvantage of middlemen was that there was nothing to prevent them Chemosvit before competition.

- The company initially decided on indirect methods and intermediary relationships (middlemen), mainly because of:
- low company preparedness for foreign-trade activity,
- lack of knowledge on a deeper situation on foreign markets,
- direct sales risks,
- or lower costs compared to direct sales.

For the company, these methods were a springboard for the development of their own foreign trade.

Opportunities in the open market, highlighted by the turbulent development by information and communication technologies, have meant both the great opportunities and threats to business. Chemosvit gained very fast business experience from the international environment, company management was opened to new conditions and maximally supported the use of new opportunities, which were also directly addressed within Chemosvit by General Director Ing. Michal Each, who at that time (since 1992) became president of the Federation of Employers' Associations of the Slovak Republic (AZZZ SR is an association with legal personality founded in 1991 to create conditions for dynamic business development in Slovak Republic and protection and promotion of the employers, business and commercial interests of its members). He was thereby in constant contact with the Slovak and European institutions and organizations. At that time, Europe was undergoing through major political changes. At the same time markets have changed, also consumer habits, international trade associations have created. As the CEO of Chemosvit he intensively perceived, supported and implemented the new managerial and marketing tools, whether on national (macroeconomic) or business (microeconomic) level. And so, within the framework of CzechoSlovak Republic, and on the initiative of Chemosvit, was created Packaging Association SYBA (Packaging Systems - SYBA is a packaging association based in Prague, it promotes the interests of business organizations active in the packaging industry), which played an important role in the history of Chemosvit in promoting of sales abroad.

The implemented changes were always aimed to securing of comprehensive customer care, and such changes included the creation of foreign business representatives: Chemosvit International B.V., Amstelveen (Netherlands), Chemosvit Bohemia a.s., Rohatec (Czech Republic) and commercial and technical offices (CTO) in Prague, CTO in Krakow and CTO in Warsaw (Poland), CTO in Moscow and CTO in Petersburg (Russia), CTO in Bonn (Germany). The purpose of foreign affiliates was:

- increase sales,
- advantageous purchase of raw materials,
- constant presentation on a major market and to be close to customers,
- customer advice and support,
- coordination of production for customers in Svít,
- optimization of logistics activities,
- effective participation in trade fairs.

Trade policy and the intention to build sales offices abroad were continually evaluated and optimized with the surrounding market environment. They have boosted export growth in new

territories and have become the basis for technology modernization and further investment development that has brought society closer to the level of western companies in a short period of time.

2.1.2 Acquisition and restructuring of Ukrainian company

Simultaneously with the development of export activities, the possibilities of production abroad were evaluated. As an effective way after long-term research of territories has appeared the acquisitions in Poland and in the Ukraine. After a historic visit to company named VAT Luckplastmas in the northwest of the Ukraine in July 1995, which at the time employed 1,200 people in the plastics industry and was at a standstill, the CEO of Chemosvit said: "Ukraine is our immediate neighbor. One of the largest countries in Europe with a huge, yet undeveloped packaging film market. Our technical advantage, advanced packaging production, extensive know-how and Slavic affinity predetermines our interest in this territory. We think we have a greater chance of being achieved in this territory than any other country." And it was decided.

The National Property Fund of the Ukraine and Chemosvit concluded a sale-purchase contract for shares of the company Luckplastmas with the investment commitments in 1996.

The company was in a very unfavourable economic situation. It had obsolete with technical and technological equipments, mostly from the 1960s. The bad economic situation has left a substantial part of the competent and powerful people away from company. In company remained people who were satisfied with an average earnings of \$ 40 per month. The factory was almost inoperative, because after the collapse of the former Soviet Union lost markets, and without the external help it had no chance in normal economic conditions to exist. Negative was the lack of high quality middle-level management staff and low-level job discipline. Raw materials were available at world prices and there was a big problem with energy availability.

The plant was spread over an area of 35.6 hectares, including water purification facilities, utility water service stations, a freight train station, apple orchards, and other areas not directly related to the production. The restructuring of the company was gradually phased out and the production area in 2005 was 24.2 ha. The factory had several production halls with dimensions 144x144m.

Subsequently, since the autumn of 1995, Luckplastmas have been involved by specialists from Chemosvit who have made expert analyzes to assess the quality and quantity of internal resources. Not only production sources, but also human resources, assessment of the technical condition of production premises, assessment of the state of the site, production and availability of energy and the whole energy system, processing of secondary raw materials and waste, water, buildings, roads, railway siding, guarding, fire protection, telecommunications, information and communication technologies and other impacts such as sales and purchases, or accounting, or legislation.

The co-operation area was selected for capacitor films and food packaging films, which status at that time was:

- capacitor films - low quality level, uniformity of thickness unacceptable, production of capacitor films badly projected and operation was not clean in terms of dust-free, as in Svit. It was also qualified as inappropriate for food packaging films
- food packaging films - production on old facilities and a major drawback was the lack of knowledge of the domestic food market.

In the first phase of cooperation Luckplastmas with Chemosvit was established the joint venture ZAT ((zakryte akcionerhoe tovarištvo) Luckchim (50% Chemosvit and 50% Luckplastmas)

with 200,000 USD registered capital. Chemosvit has built an entirely new production of PE film at 2.2 million. USD, and in April 1996, the trial started. In 1997, Chemosvit purchased shares from Luckplastmas and increased its stake to 99.9%. Subsequently, Luckchim sold it to Luckplastmas and thus became Luckchim's 100% subsidiary.

At the General Assembly on January 30, 1997, the status of an open joint-stock company (VAT) Luckplastmas was accepted, registered by the Executive Committee of the Municipal Council of the National parliamentarians of Luck and was approved by the decision of the Ministry of Industry of Ukraine. The statute precisely defined legal matters under Ukrainian law. For example, also information how the company may be liquidated.

After analyzes and on the basis of a more detailed knowledge of the company's real status, at the beginning of 1997, Chemosvit submitted on National Property Fund of Ukraine the specified and clarified the investment program and asked for a transfer of shares to Chemosvit a year earlier, that is to say, in 1997. National Property Fund of Ukraine met the Chemosvit's request and so it became the owner of VAT Luckplastmas. The land, under the Ukrainian legislation, remained the property of the city and Chemosvit got them into long-term lease.

It followed the restructuring of the company, revitalizing and investing in prospective production and at the same time dulling non prospective activities. There was also a problem with approximately 500 redundant jobs at the same time, which was succeeded in resolving with co-operation the state authorities and with employees, so Luckplastmas had less than 300 employees in 1999.

In view of the wide portfolio, the continuing unfavorable economic results in the company and the low efficiency of the individual activities, the restructuring of the parent company Luckplastmas was designed and implemented:

- orientation to management and care of the company's premises, its infrastructure and facilities, rental and services to companies within and outside the Chemosvit Group,
- orientation to activities related to the production and distribution of heat, distribution of electricity, drinking and service water and gas, engineering networks (power distribution, water distribution and sewerage);
- the separation of engineering into Strojchem - Luckplastmas, daughter company
- to decouple the production and processing of plastics from Luckplastmas. The limited liability company Luckplastmas TzOV (tovarištvo z obmeženoju vidpovidaľnistiu), which operated 24 plastics injection equipments, but was unable to compete on the market and its activity was in 2014 stopped.

The period of formation and development of business activities Chemosvit in the area of Luckplastmas was significantly influenced by Ukraine's changing business environment. Many projects have been successful, but some have not gone, for example with Europack a.s. from Dunajska Streda and Greiner for the production of yogurt gallipots, with Israeli company CLP Industries for the production of stand-up sacks, or with French Abzac for tubes production.

2.1.3 Multicultural differences and management

The language barrier was not a problem. The problem was management. The hierarchy of subordination and superiority was much more pronounced than in our country. In the top positions, but also in the middle management were men only. However, in manufacturing as service staff, there were more women than men. It was sensible to overcome primary shyness and, above all, less responsive access to work duties. But what was the most striking difference was that it was unpunctuality (be on time). Any simple thing has been handled for a long time.

The precious "minutočka" (short minute) took hours. In this, a truly multicultural difference has to be overcome. And it was the same whether if it was management, administration, servicing or manufacturing. After 20 years it can be said that after the successful restructuring and stabilization of the new Ukrainian companies incorporated into the Slovak holding, this property of the Ukrainian workers employed in the company was overcome even though it sometimes happens today with new employees.

In the first five years, Slovak managers were always present in Ukrainian companies. The top positions featured both countries. Later on, this constant presence was changed according to what projects were being implemented and how the situation required. It took sometimes weeks or months.

3. Conclusion

The success story of Chemosvit's entry into the foreign market talks about the successful verification of the scientific theory about the entry of the business entity into the foreign market and its implementation in practice.

Knowledge of the cultural environment, local preferences, business habits, and willingness and ability to adapt are of extraordinary importance for the company's success in international markets. Adaptation is only possible if a foreign firm and its management recognize local customs, tradition, culture and, of course, the market and its potential.

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Ergonomic workplace architecture

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Abstract

It is in this world that ergonomics takes on a whole new meaning, a world where the amelioration of harsh working conditions is subservient to basic day-to-day survival. It is here, in what we euphemistically call the “informal sector,” that human beings toil long hours at brutal tasks which none in the “advanced” world would tolerate; tasks long since legislated against in the developed world. Their needs are greater and tragically most often they are unaware that their conditions can in fact be dramatically improved.

Keywords: ergonomics, design, workplace, benefits, architecture

JEL Classification: R30, R39

1. Introduction

Ergonomics is a body of knowledge about human abilities, human limitations, and other human characteristics that are relevant to design. Ergonomic design is the application of this body of knowledge to the design of tools, machines, systems, tasks, jobs, and environments for safe, comfortable, and effective human use. The underlying philosophy of ergonomics is to design work systems where job demands are within the capacities of the workforce. (Board of Certification in Professional Ergonomics 21000)

Ergonomics is seen today as a vital component of the value-adding activities of the company, with well-documented cost–benefit aspects of the ergonomics management programs (GAO, 1997). A company must be prepared to accept a participative culture and utilize participative techniques in implementation of work design principles. The job design-related problems and consequent intervention should go beyond engineering solutions and include all aspects of business processes, including product design, engineering and manufacturing, quality management, and work organizational issues, along the side of task design or worker education and training . (Karwowski & Salvendy, 2004; Karwowski & Marras, 2006; Genaidy, Karwowski & Christensen, 2010)

2. Generations of ergonomics

The first generation focused on adapting the ‘physical fit’ of equipment, workplace and tasks to match human capabilities and limitations. The second generation was spawned by the growth of complexity of work environments and systems, and focuses on systems rather than on workplaces and tasks. Complexity is an unintended by-product of combining people, technology and work. The third generation is characterized by enabling humans to perform better, instead of designing better work environments. The fourth generation, according to Boff, aims to maximize human effectiveness. Information, biological and nanotechnologies are

enabling the ability to redesign our basic human factors: how we think, how we feel, how we look, how we age and how we communicate. This generation of ergonomics looks forward to the future. (Koningsveld, Settels & Pikaar, 2007; Gilbertová & Matoušek, 2002; Burke, 2012)

3. Ergonomics and design

Ergonomic design in safety management is the application of human-factors engineering to the elements of form (structure) and function (ambience). The physical environment must accommodate the widest range of human functional limitations to enhance the usability of any area. Cost-effectiveness in ergonomics is a result of design incentives. Design is critical to ergonomics as a systematic planned approach to using all the relevant characteristics of employees (biomechanics, senses, psychology, intellect) to create the optimum interface between these employees and manmade objects, operational facilities, and working environments. Ergonomic design should enhance productivity and efficiency by reducing stresses and fatigue so that employees can work productively and safely, and produce high-quality work. In ergonomics, design should strive to understand and maintain the unique functional capacities of people in the workplace environment. Design should consider people with respect to methods of work, materials used, machines, equipment, tools, and instruments as guides. Design should consider people as using their bodies biomechanically, sensorially, psychologically, and intellectually. (Scott, 2009; Kearney, 2008; Cook, Hatlar, & Rosecrance, 2000)

Ergonomic design benefits:

- improved safety,
- increased productivity.

Consequences of not using ergonomic design:

- lost time,
- increased cost,
- legal citation,
- lost quality.

Employers want to know if the work site design makes the best use of:

- esthetics and image,
- ease of maintenance,
- function and fitness,
- lowered first costs and life cycle costs,
- responsiveness of a status-marking system,
- bulk purchase agreements or existing inventory. (Scott, 2009; Cook, Hatlar, & Rosecrance, 2000; Gilbertová & Matoušek, 2002)

Employers want to know if the rooms satisfy criteria while meeting corporate standards, laws, and guidelines of (Beno, Bozekova, Markova & Hatlar, 2010):

- appearance,
- comfort,
- ease of communication,
- ease of participation,
- flexibility,
- layout,

- occupancy level,
- relocation frequency,
- safety (rules posted):
 - equipment grounded
 - no extension cords
 - safe smoking areas
 - rugs secure

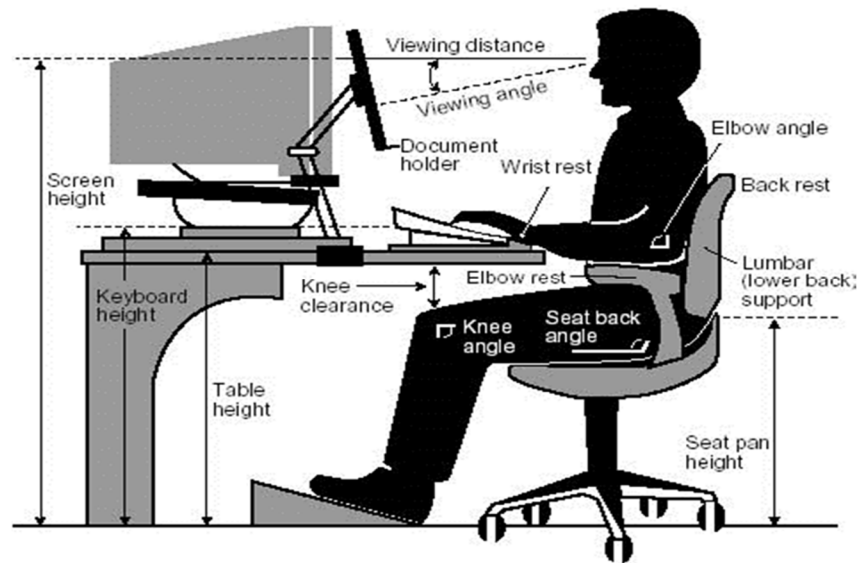
Both employees and employers want to know if the room provides the appropriate atmosphere by:

- increasing opportunities for individual choice,
- encouraging independence,
- compensating for changes in perception and sensory acuity,
- decreasing unnecessary mobility,
- encouraging social interaction,
- stimulating participation in activities offered,
- reducing conflict and distraction,
- providing a safe environment,
- making activities accessible,
- improving employer and employee image,
- allowing for growth and change in individuals.

Quality check considerations:

- Are tasks performed more efficiently?
- Are productivity rates maintained or exceeded?
- Are stressors diminished?
- Have muscular stressors been eliminated?
- Have injuries and symptoms been reduced?
- Is the physical relationship with equipment well integrated for the employee?
- Are accessories within easy reach?
- Are there resources for performing the tasks?
- Has the intensity of concentration required been reduced?
- Is the environment totally accessible?
- Have the individual's limitations been mitigated by well-integrated interventions?
- What effect have the interventions had on other employees and supervisors? (Scott, 2009; Kearney, 2008; Gilbertová & Matoušek, 2002)

Figure 1: Ergonomic workplace architecture



4. Using anthropometric data in design

Anthropometric data describe the body sizes of people in standardized erect postures. Such information is basic for the design of workspaces and equipment, of tools and clothing, which must fit the human body.

The “Normative” Adult:

- “normal” anthropometry, with all body dimensions (such as stature, hand reach or weight) close to their mean values;
- “normal” physiological functions, such as of the metabolic, circulatory and respiratory subsystems; whose nervous control functions, sensory capabilities and intelligence are all near “average”.

In reality, however, hardly any person exists who is average in all or many respects; instead, “extraordinary” persons and population subgroups abound: very big or small individuals, temporarily or permanently impaired persons, women during their pregnancy, children and juveniles, or elderly people. So, instead of using the imaginary “normal adult” as design prototype, we must consider the variability that exists naturally among “not-ordinary” people of different body sizes, genders, ages, and abilities. (Gilbertová & Matoušek, 2002; Burke, 2012)

Guidelines for the conversion of standard measuring postures to functional stances and dimensions:

Slumped standing or sitting	Deduct 5–10% from relevant height measurements
Relaxed trunk	Add 5–10% to trunk circumferences and depths
Wearing shoes	Add approximately 25 mm to relevant standing and sitting heights; more for “high heels”
Wearing light clothing	Add about 5% to relevant dimensions
Wearing heavy clothing	Add 15% or more to relevant dimensions. (Note that heavy clothing may strongly reduce mobility)

Extended reaches	Add 10% or more to relevant reach measures for strong motions of the trunk
Use of hand tools	Center of handle is at about 40% of hand length, measured from the wrist
Forward bending of head, neck and trunk	Ear-Eye Line declines to near horizontal
Comfortable seat height	Subtract up to 10% from popliteal height

5. Conclusion

Useful steps in designing for fitting clothing, tools, workstations, and equipment to the body are as follows: (Gilbertová & Matoušek, 2002; Attwood, Deep & Danz-Reece, 2004)

Step 1: Select those anthropometric measures that directly relate to important design dimensions. A few examples: hand length relates to handle size; knee height and hip breadth relate to the leg room in a console; shoulder and hip breadth relate to escape-hatch diameter; head length and breadth relate to helmet size; eye height relates to the heights of windows and displays; stature relates to the height of a door frame.

Step 2: For each of these pairings, determine whether the design must fit only one given percentile – minimal or maximal – of the body dimension, or a range along that body dimension. Examples: the escape hatch must be big enough to clear the extreme largest values of shoulder breadth and hip breadth, enlarged by clothing and equipment worn. The handle size of pliers should probably best fit a smallish hand; the legroom of a console must accommodate the tallest knee heights. The height of a seat should be adjustable to fit persons with short and with long lower legs. A door opening should be higher than the tallest person to avoid bloody scalps.

Step 3: Combine all selected design values in a carefully devised sample, computer model, mock-up, or drawing to ascertain that they are compatible. Example: a tall legroom clearance height, needed for sitting persons with long lower legs, may be very close to, even interfere with the height of the working surface, which depends on elbow height.

Step 4: Determine whether one design will fit all users – if not, several sizes or adjustment must be provided to accommodate the users. Examples are: one extra-large bed size fits all sleepers; gloves and shoes must come in different sizes; seat heights should be adjustable.

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Economic competition and its significance in conditions of the Slovak Republic

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Abstract

Effective competition creates pressure on undertakings to improve the quality of products and services offered and reduce their prices in order to be successful in the tough competitive struggle. Competition stimulates higher effectiveness in many different ways. A competitive environment creates better conditions and expansion opportunities for undertakings concerned and facilitates their entry into the market. In view of a possible loss of market positions as a result of competitive struggle, the implementation of new technology and innovations is progressing more intensively, namely through research, development, patents, and so forth. Competition is effective if independent entities operate in a market, each facing competitive pressure from others. Entities operating in the market derive their behaviour from the structure of the market. Therefore, control of concentrations prevents the establishment or strengthening of dominant entities, which would not be subject to adequate competitive pressure. Economic competition is an eminent instrument for effective and positive function which has influence progressing in economy of market. Although not every behavior of competition is allowable from economy competition. Entities in ambition benefit their position in market or obtain some benefits often resort for practices which are prohibited. Such acting constitutes unfair competition, which is defiance of good mores of competition and it is able to cause drawback other participants of market. But it is not inevitable to cause material drawback. It may cause nonmaterial drawback, too. At propagation products or duties by business subjects, we can often pick on unfair competition, which constitutes not only one from significant facts of unfair competition. Consequently, it is very important to prevent anticompetitive behavior from companies SR (parasitical on goodwill, false advertisement, false branding of goods and duties, evoke danger of Exchange, and so forth).

Key words: economic competition, unfair competition, competition, market, business subject, protection, good mores

JEL Classification: F40, H00, H12

1. Introduction

The expression economic competition in conditions of SR is not exactly defined but can be expressed as a competition of subjects in economic area with the aim to overcome them and reach economic success. Economic competition is one of the basic attributes of market economy. The base of economic competition is a free entry to the market and equality of market behaviour of the participants of economic competition. The function of economic competition protection is protecting the clarity of the competition. Economic competition is a factor of high priority within granting harmonic working of economy.

The right against limitation of economic competition in Slovak Republic is modified by public law, which protects the competition in macroeconomic sense, as well as by private law, which protects the competition in microeconomic sense.

The consumer is the main addressee of the advantages coming from working economic competition. Moreover, applying competition policy on relationships among entrepreneurs

takes place including the consumer as well. If economic competition works well, the consumer profits from lower price and higher quality of products and services. On the contrary, if economic competition is violated by anti competitive behaviour of entrepreneurs, the consumer is harmed – they pay more for the product or service or obtain quality, they would never accept under normal circumstances.

Primary goal of this paper is evaluation of position of unfair competition as a part of economic competition in conditions of the Slovak Republic.

To reach the primary goal we set the following partial goals such as:

Research of position of selected merits of unfair acting like:

- unfair competition
- misleading advertising
- misleading branding of products and services
- inducing a risk of confusion
- free-riding and reputation
- bribery
- trivializing
- violation of business secrets
- threats to health and environment

2. Methodology

Effective economic competition represents the base of free market economy. It reduces prices, increases quality, provides the consumer with the possibility of better choice and enables development of technological innovations. It represents a set of certain rules of behaviour of entrepreneurs and the state on market they have to follow in order to keep the economic development in favour of the consumers and the whole society. It Works effectively if entrepreneurs on the market can make their business decision individually. It is a tool to solve market failures which come from shortage of competition.

Every participant of the market, who wants to be successful in the competition, is forced to fulfil the functions of economic competition and contribute to efficiency of the society on one side, and each entrepreneur realizes that one of the ways to eliminate the risk of market failure and defeat the competitors is to use the strategy which violates the proper competitive environment and leads to limitation of economic competition on the other side.

In accordance with the goal of the paper thee research was based on scientific methods such as analysis, synthesis and comparison.

3.Results and discussion

Position of economic competition in conditions of SR

Economic competition is inevitable for market economy. However, not every competitive behaviour is relevant from the economic competition point of view. Alongside with the competitive behaviour without economic basis there are social relations with the economic basis as well which cause, or may cause, regularities of economic competition. There are as well social interests predominant over interests applied within protection of economic competition. Therefore, the state which should be the guarantor of the rule protection protects them only until there are no reasons to limits or exclusion of economic competition in public interests. Protection of economic competition cannot therefore be overestimated above all the other interests, nor rights and freedom of private entities. The participants of economic competition

are obliged to follow the legally binding rules of economic competition and cannot misuse the participation in the competition.

Economic competition as a guarantee of efficiency and positive activity on the development of competitiveness and stability of economy is inseparable economical and legal category of the market mechanism. Effective economic competition increases quality of economic efficiency. The expression effective economic competition means that natural persons and legal entities, even though they are not entrepreneurs, have the right to develop their competitive activity in order to reach economic success associate to perform this activity; they are obliged to follow the legally binding rules of economic competition and cannot misuse the participation at the competition. It is a significant tool that protects and supports economically significant activities of the subjects in order to create priority criteria of success on the certain market.

Freedom or executing business decisions individually includes the right of an entrepreneur to naturally adjust their behaviour to the market environment. The assumption for effective economic competition is therefore exclusion of any direct or indirect contacts among competitors, whose goal or effect is to influence behaviour of their competitor (real or potential), as well as exclusion of revealing the business plan to the competitors. That means exclusion of situations when there is no natural adjusting to market environment.

In countries with developed market economy the state represents the role of the protector of economic competition and the law governing economic competition keeps its position in legislation of not only member states of the EU but in community law as well. The meaning of the economic competition right consists especially from elimination of creating artificial barriers on the product, performance, labour and service market. Natural persons as well as business entities who take part in economic competition, even though they are not entrepreneurs, have the right to develop their competitive activity in order to reach economic success and associate to perform this activity, they are obliged to follow the legally binding rules of economic competition and cannot misuse the participation at the competition.

The right against limitation of economic competition in SR is modified by public law which protects the competition in macroeconomic sense as well as by private law which protects the competition in microeconomic sense.

Illicit limitation of economic competition is defined by individual act – the Act of National Council of the Slovak Republic no. 136/2001 L. I. on the protection of economic competition as amended. The purpose of this act is protection of economic competition on product, performance, labour and service market against its limitation as well as creating conditions for its further development with the aim to support economic development in favour of the consumers. The Slovak Republic applies Slovak as well as European competition right in the sense of Regulation of the Council (ES) no. 1/2003 from 16 December 2002 on executing the rules of economic competition stated in section 81 and 82 of the Agreement about European Union („EU“). The body of legal protection in this case is the Antimonopoly Office of the Slovak Republic.

The Antimonopoly Office of the Slovak Republic is an independent central body of state administration of the Slovak Republic for the protection of competition. The Office intervenes in cases of cartels, abuse of a dominant position, vertical agreements; it controls mergers that meet the notification criteria and assesses actions of state and local administration authorities if they restrict competition. The Antimonopoly Office applies Slovak and European competition law. Within the European Competition Network (ECN) the Office fulfils the tasks resulting from the membership of the Slovak Republic in the European Union.

The Antimonopoly Office has always tried to fulfil its mission – protecting economic competition in a way that the consumer in the end gets the best the working economic competition can provide.

Position of unfair competition as a part of economic competition in SR

Primary source is the regulation of unfair competition according to the Commercial Law of SR and, as Slovak Republic is a member of the European Union, respects community regulation of unfair competition. Unfair competition means breaking the obligations coming from private law, the body of legal protection in these cases are courts. Unfair competition is defined by so called General clause. Unfair competition is prohibited. The generality of General clause which may on one side seem like negative, means flexibility in each case on the other side. To qualify certain behaviour as unfair, there must be three cumulative conditions fulfilled:

- Acting in economic competition,
- Such acting contravenes good manners of competition,
- Such acting causes drawback (material as well as nonmaterial).

Conduct contrary to good manners within economic competition means conduct contrary to traditions, exhibits signs of discrimination or deviation from the rules of morality within economic competition. It is conduct which may cause drawback to a competitor if they do not keep good faith, honesty, tradition in economic competition and they use practice result of what is failure, deceit, threat or significant inequality of contracting parties. Such acting is hard to prove and that is why there are only a few conflicts. Drawback may be material or nonmaterial. It may not emerge it may just be a threat. A competitor has the right for satisfaction. It may be caused by abusing the human feelings, tendency to compete, inappropriate attracting of the customer, providing incorrect data within sale. It might be pyramid games, selling products at a purchase price, a hidden advertising.

Unfair competition is especially: misleading advertising, misleading branding of products and services, inducing a risk of confusion, free-riding and reputation, bribery, trivializing, violation of business secrets, threats to health and environment and so forth.

a) misleading advertising

The ability to succeed is the basic condition of the abilities of a competitor for a success in economic competition. A advertising is a proper tool to support entrepreneur within realization of heir economic goals. Definition of this expression is not found in the Commercial Law of SR, it can e found in Act no. 147/2001 L. l. – the Act on advertising as „a presentation of products in each form with the aim to apply them on the market“.

Strong competitive environment and effort to attract a customer costs a lot of effort which is not always in accordance with the legal right. One of the misdemeanor of advertising is misleading advertising. Misleading is understood as ability to create „misleading“, i. e. wrong (not real) imagination which is not real. Effort to lie, embellish and change information in somebody's favour is natural human feature. The right therefore cannot protect certain characteristics of advertising because it would not be an advertisement.

To be able to classify certain acting as misleading advertising it must contain:

- Sign of advertisement – presentation of products (things and rights) in every form with the aim to apply it on the market;
- Subject of advertising – property values defined by legislation such as: products, services, property, business name, trademark, origin of product, and other rights and

commitments, advertising is not: standard identification of legal entities, address of natural persons, designating the establishment or organizational unit of legal entity or natural person by a business name, designating of buildings, properties and other properties or things owned by or rented by these persons, designating of letters and envelopes by business name or trademark, designating products or their containers by data which must be stated on the top of it according to individual regulation, publishing annual report about business, financial statement, audit of the company or other information about the company if the obligation of their publishing comes from an individual regulation;

- Objective ability to mislead persons who it is meant for (or only a threat) and thanks to misleading may influence economic behaviour of those persons (or only threat), or harms or may harm the addressee (or only threat). In order to secure and enforce honest, neat, decent, legal and truthful advertising in Slovak Republic an association called Board of advertising was created with the aim to self – regulation of advertising market. The founders are subjects who actively penetrate the process of marketing communication (sponsors of advertisement, advertising agencies and clients). The activity of the Board of advertising is conducted by Ethical code, statutes and rules of procedure of Arbitration Committee created within the Board. The committee accepts and evaluates complaints of individual subjects whether they are in accordance with Ethical code. Even though the resolutions are not legally binding they are considerably important within professional environment and among consumers. Their publishing „self – regulates“ the advertising market and contributes to ethics policy and decency in the area of advertising and economic competition.

b) misleading branding of products and services,

Misleading branding of products and services is every branding which is able to cause misleading idea in economic relationship that the product or service come from certain state, area or place or from certain producer or that they exhibit certain characteristically signs or individual quality. Confusing is whether branding was on the product, container, business papers and so on. It is also confusing whether misleading branding was direct or indirect and how it happened. The provisions of a special law shall apply similarly.

c) inducing a risk of confusion,

Just like most of merits of unfair competition even inducing a risk of confusion is a threatening misdemeanor, i. e. the condition of obtaining success does not need to be fulfilled nor condition of effort to induce a risk of confusion or at least knowledge that such acting may lead to confusion.

The expression confusion from the merits point of view is created by two conditions that must be fulfilled simultaneously: own confusion and misleading that lead to confusion. We may state that every misleading branding contains a symbol (subject) of misleading but not every misleading branding leads to confusion. Only confusion which leads to misleading of the public may be understood as unfair competition because only that confusion is able to violate the function of economic competition, i. e. misuse the participation at economic competition.

d) free-riding on products or services of other competitor and reputation,

Free – riding is using the reputation of the company, products or services of other competitor with the aim to reach success for the business, which would not be possible otherwise.

e) bribery,

Bribery or corruption belongs to severe antisocial behaviour, which endangers development of public and economic life. It eliminates equality of chances as the basic principle of economic competition. This type of behaviour is preferred by people, who do not feel adequately evaluated and have certain competencies to make decisions, and competitors, who see great opportunity of victory over competition. Proving this behaviour is complicated or even impossible if there is no direct impulse from the participants of the behaviour. We come across corruption especially in media, in connection with the public sector and public procurement. This does not mean that corruption is not connected with common business environment.

f) trivializing

Trivializing is behaviour of a competitor connected with reputation of products or performance of other competitor that is not true or is meant to harm the other competitor. Trivializing is also stating and spreading true information about relations, products or performance of other competitor if these are able to cause drawback. Unfair competition is not the situation when the competitor was forced to such behaviour by certain circumstances (legitimate defense) or if these data was given in comparison advertising.

g) violation of business secrets,

As for violation of business secrets, it is all the facts of business, production or technical characteristics connected with the company which have real or at least potential material or nonmaterial value, are not accessible in business environment, should be confidential and entrepreneur secures its confidentiality.

The given merit is connected with the rapacity of competitors within economic competition with the aim to get secret information of competing competitors (price offers and action on customer acquisition, list of customers or key business partners, various know-how, financial information and budget, information about innovations without patents, planned marketing campaigns, various approaches and methods etc.) in order to use them for their success. Intentional acting might be expressed as „spying“ or „industrial spy“, as the rights for business secrets are classified among so called industrial rights.

h) threats to health of consumers and environment,

acting by which the competitor misrepresents the conditions of economic competition by running production, launching products or performing act dangerous for health and environment to gain success for himself or for their competitors or consumers.

The given merit of the misdemeanor, just like most of the merits of unfair competition, does not require this type of behaviour, the threat of it is sufficient. The fulfilment of the merit might be realized alongside the whole phase of consumer – seller chain.

We come across the unfair competition relatively often even though it is only latent behaviour. Businesses, especially micro and small companies, very often use practices of unfair competition. Shocking is that they often do it intentionally. It is most common in advertising within mass media. Knowledge of consumers is relatively huge and therefore in case of suspicion of using some of the tools of unfair competition they call for help at the Board for advertising and transmission with their complaints or at the courts of SR. However, there are entrepreneurs who commit unfair practices without knowing but in these cases their behaviour is not acceptable anyway.

Socially and ecologically oriented market economy is built in principles of free business and free economic competition and it is one of the basic principles of the economy of the Slovak Republic. Support of culture of economic competition directly contributes to better function of markets in favour of consumers and companies.

4. Conclusions

Unfair competition negatively interferes into process of economic competition and represents significant social issue. The issue of unfair competition asks for concentrated attention of the persons as well as all the society. It is clear that in combat with unfair competition preventive function is fulfilled by enlightenment and well informed subject will avoid illegal acts and simultaneously defend against it. Defeat would be beneficial for all the subjects of economic life, competition would be transparent, it would bring reasonable share of source, it would support research and development, it would favourably influence prices, and the whole quality of society's life.

Consistent enforcement of economic competition which aims to remove the basic barriers for market economic competition helps to create good conditions for economic growth of SR. Competition is the key mechanism of the market economy, which ensures that the economy optimally utilizes its resources and pressure for innovations and economic growth is being created.

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What is the relationship between the number of SMEs, their outcome and the number of their employees, and 16 selected indicators (measuring mostly competitiveness) in the EU 28?

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Abstract

Our paper examines the relationship between the number of SMEs, the added value they create, the number of their employees, and the country's population, the rate of economic freedom, the WEF competitiveness ranking and components thereof as well as the degree of religious devotion in the EU28. Prior to delivering the results of correlation-calculations we review relevant literature, set up hypotheses, then measure and finally, present our concise conclusions.

Keywords: cross-country, EU, performance, SME

JEL Classification: M21, O43, P51

1. Introduction

SME's account for half to two-thirds of modern economies whether for the number of people employed or for their contribution to GDP. In his landmark studies Acs (Acs and Audretsch 1994, Acs and Varga 2005; Acs 2010) distinguishes between two types of entrepreneurs; a) less developed economies typically trigger the emergence of necessity-entrepreneurs whereby people forced out of large enterprises attempt to find employment with low wages in companies operating at low efficiency levels, and b) opportunity-entrepreneurs, who, on the contrary, are dissatisfied with large companies and aspire to realise their own ideas. According to Fukuyama (1995) large private enterprises emerge in environments with a high degree of mutual confidence, where appointing non-relatives to lead departments is not considered a risk. Where confidence is limited large companies are but publicly- or foreign-owned ones. Considering these two aspects, the way Europe works is distinctive; Protestant, Catholic and non-religious owners alike trust their neighbours thus large enterprises have a considerable share of the market. However, unlike in the US for the fear of the risk involved, in Europe instead of small companies developing new products large companies use novel processes in manufacturing. Therefore, as suggested by Acs and Fukuyama, in Europe larger enterprises are to be expected than in the US or many Asian countries.

What are then the distinctive features of small enterprises in the 28 European countries? We are looking to find the answers to three questions. 1) What is the number of small enterprises by 100,000 inhabitants? 2) How much is the GDP value they produce by 100,000 inhabitants? 3) How many people do SMEs employ by 100,000 inhabitants?

The structure of the paper is as follows: first we review relevant literature, including sources that define the selection of indicators. Then we examine the relationships between the explanatory and outcome variables followed by describing the relationships between various explanatory variables.

2. Literature review

2.1 Review of Theory

- a) Substantial evidence has confirmed the key impact of enterprises on economic growth (Acs, 2006, Carree & Thurik, 2010, Van Praag & Verslort, 2007, Klapper, Amit, Guillén & Quesada, 2007, European Commission, 2013 etc.). SMEs create proportionately more jobs than large companies with start-ups pioneering radical innovation. They transmit their experience to large enterprises, which then utilize it efficiently. The great number of start-ups bolsters competitiveness and economic growth and with a delay of 5 to 8 years this has a favourable impact on employment growth (Klapper et al, 2007). Therefore, a high number of enterprises in an economy affects growth positively and we know that the majority are small and medium sized enterprises. (Within the European Union over 99% of companies are SMEs, this sector accounts for 58% of added value and for two thirds of the jobs in the private sector.)
- b) There are significant differences in entrepreneurial disposition between countries. Various studies have investigated the reasons behind this. The explanations for the differences may include disparities in economic development as measured by GDP per capita (GEM) but also demographic, cultural and institutional differences (Blanchflower 2000, Wennekers 2006).
- c) The impact of cultural values is also much researched (Thurik & Dejardin, 2014 ; Acs & Szerb 2010; Autio, Pathak and Wennberg 2010; Freytag and Thurik 2010; Henrekson and Sanandaji 2010; Stephan and Uhlaner 2010) and although the lack of aggregate data has so far prevented the identification of the role certain cultural dimensions play there is consensus that they are no less important factors than economic and regulatory regimes (Djankov, La Porta, Lopez-de-Silanes and Shleifer 2000; Van Stel, Storey and Thurik 2007; Bowen and De Clercq 2008).

2.2 The literature behind the selected indicators

- a) The Global Competitiveness Index (WEF GCI and its components), an exhaustive study by Schwab and Sala-i-Martin (2003-2016).
- b) According to Schumpeter (1934) innovation is the key to any development whether it is a product, or a process innovation.
- c) According to Acemoglu and Robinson (2012) institutions matter. These can be either inclusive or extractive, economic or political institutions. Fukuyama (1995) claims that political rights and cultural determinants impact economic growth.
- d) Weber (1905) argues for the importance of religion in economic performance. He attributes the rise of capitalism to Protestant ethics; the higher the share of Protestant population the higher the rate of growth. Others credit the Cistercian order with introducing the principle of hard work and frugality (Andersen, Bentzen, Dalgaard & Sharp, 2015).
- e) The Global Entrepreneurship and Development Index (GEDI) (Acs & Szerb, 2010), the composite index comprising a set of individual and institutional indicators uses generally accepted indices such as GCI, the Ease of doing business index (developed by the World Bank Group) and their correlations.

The history of selecting indicators to describe the good economy is no shorter than the history of comprehensive economic theories; it goes back to Aristotle, Thomas Aquinas and Adam Smith. We, however, attempt an undertaking of a far smaller scale, namely, to compare European SMEs' number, resources and outcome to data comprising explanatory variables.

3. The correlation between SMEs and variables explaining competitiveness

In Table 1. we list 16 independent variables and seek to find the correlation with the outcome variable along these. The cells in the table contain the rate, the direction and the significance level of the correlation. (Number of observances: 221 to 245)

Table 1. The correlation of the specific number of SMEs, the GDP produced and the number of people employed against 16 variables

Table 1: Data and variables

	Number of SMEs/ 10 M population	GDP produced by SMEs/10 M population	Number of employees in SMEs/10 M population
Population of the country			
Patent applications	-,113	,859**	,248**
Economic freedom	-,304**	,582**	,236**
Competitiveness	-,282**	,696**	-,006
Institutions	-,219**	,776**	,171**
Property rights	-,221**	,744**	,151*
Intellectual property protection	-,183**	,779**	,101
Protection of minority shareholders' interests	-,117	,631**	,100
Higher education	-,181**	,469**	-,046
Business sophistication	-,199**	,716**	,017
Innovation	-,184**	,704**	-,012
Corruption	-,204**	,784**	,143*
Perception of entrepreneurial opportunity	-,179**	,542**	,200**
Trust in politicians	-,203**	,756**	,112
Trust in the legal system	-,142*	,762**	,154*
Religiosity	-,131*	-,298**	-,360**

Source: own calculations, with * weaker and ** stronger level of significance.

We have examined several tables of the above type as we wanted to explore the strength of correlations for a) the whole of the economy, b) for the industry, c) for trade and c) for non-trade services (not examining agriculture). In this paper, we analyse only a). It is expedient to present our primary expectations against the backdrop of sources; comparing our projections on the correlation scores ex ante to the results of our calculations.

a) The population of countries

a.1. In Europe (EU 28) the average population by country comes to 18 million (in 2015) with a higher variance (23 million) i.e. Germany's population is approximately 100 times that of Cyprus with standard deviation very high within the EU. Some companies, such as banks, are service providers located in the proximity of their markets and large company size requires strong purchasing power (many and rich people available). Since income disparities in the EU 28 are considerably smaller than population disparities we can expect an inverse relationship between population size and the specific number of SMEs because, ceteris paribus, in a bigger country more large enterprises can survive.

a.2 Is the GDP volume produced by SMEs expected to be higher in large countries? If the share of SMEs is smaller in a larger country and SMEs typically operate at a lower rate of efficiency (with lower wages and less up-to-date and less well-equipped machinery) we expect GDP produced by SMEs to be less in a larger country.

a.3 Finally in a larger country the specific number of SMEs is expected to be lower, they will produce less, consequently, the relative number of employees is also expected to be lower.

b) Patent per million population

b.1 As compared to the US the EU 28 have fewer opportunity entrepreneurs, so the relative number of patents is expected to be lower. However, a patent can also cover new processes applied by large companies. Therefore, on the whole, in countries with a lot of necessity entrepreneurs, more patents are expected to involve the presence of a higher number of large enterprises applying them while the number of SMEs is expected to be lower.

b.2 Assume that the more developed a country the higher the number of registered patents will be. Thus, the number of registered patents is positively correlated to the GDP volume produced by SMEs.

b.3 The same can be expected for the number of employees.

c) Economic freedom

c.1 The restriction on the use of capital control is a key feature of hyper-globalisation (Rodrik, 2012). Large enterprises move operations to locations with favourable conditions leaving places where, *ceteris paribus*, economic freedom is limited. The higher the level of economic freedom the higher the number of large and the lower the number of small enterprises.

c.2 If a high level of economic freedom is accompanied by high GDP the volume of GDP produced by SMEs is also expected to be higher.

c.3 In countries with economic freedom the number of SMEs and the number of people employed by them is expected to be lower.

d) The components of competitiveness

d.1 This is a set of indicators applied by the WEF for more than 10 years to measure more than 150 countries, in which the composing indicators (institutions, property rights, intellectual property protection, protection of minority shareholders, higher education and training, business sophistication, innovation, corruption, trust in politicians, trust in legal system) often go parallel with the composite GCI (Global Competitiveness Index) variable and typically coincide with the economic development ranking. As a high degree of competitiveness and development favour large enterprises we expect the number of SMEs per ten million population to be negatively correlated to GCI and its components.

d.2 In a country with a high competitiveness score GDP per capita is likewise high and this provides also for a high GDP volume by SMEs.

d.3 If a country is competitive with high income levels large enterprises operating highly efficiently will dominate and the number of people employed by SMEs is expected to be lower.

e) Opportunity perception

e.1 If enterprising conditions are favourable they will be perceived as favourable and if they are perceived as favourable large enterprises are expected to set foot, expand locally and stay,

which means the number of SMEs per ten million population may be negatively correlated to this variable as well.

e.2 If enterprising conditions are favourable the country will be wealthy and the volume of GDP produced by SMEs will be likewise high.

e.3 If enterprising conditions are favourable and a high number of large enterprises are present the relationship with the number of people employed by SMEs is expected to be weaker.

f) Religiosity

f.1 In the 21st century in a relatively homogeneous Europe this is unlikely to have greater significance. For the majority of variables there is no difference between Protestants and Catholics and we do not expect this to define the number of SMEs.

f.2 Religiosity is also unlikely to have an impact on SMEs' GDP.

f.3 Religiosity is also unlikely to have an impact on the number of people employed by SMEs.

Calculations have so far shown that in the 21st century in the EU the growing number of small enterprises is an indicator of something going wrong in the economy. This explains the mostly negative correlations in this column. Large enterprises will only appear in healthy economies however, the GDP volume produced by SMEs follows that of large enterprises, the accumulated knowledge is moving freely irrespective of size and more freedom, and better institutions bring about higher GDP levels for both small and large enterprises. Finally, the GDP produced by SMEs (Y) can be formulated as $Y = N \times A \times K^{0.33} \times L^{0.67}$, where N stands for the (in a more developed economy lower) number of SMEs, K, for fixed assets, which is higher in a good than in a bad economy (albeit lower than in large enterprises) and A stands for the rate of technology advancement. It is expedient to have propositions also for A and L. If the economy performs well large enterprises are increasingly expected to skim off the better qualified workforce. Consequently, N and L will move together.

Table 2: Sources of GDP in good and bad economies

	Number of SMEs	Technology	Capital	Number of workers
Advanced EU economy (high GCI)	n	A	K	l
Emerging EU economy (low GCI)	N	a	k	L

Source: own editing

A high GCI (and components) will imply n (low number of SMEs) and l (low number of employees) along with developed technology (A) and substantial capital (K). In case capital and technology are sufficient SMEs in a good economy produce considerable GDP volumes. This will result in a typically weaker correlation between employee numbers and development than between development and the number of SMEs or development and GDP produced by SMEs.

3.1. The relationship between independent variables

The supposedly 6 most important indicators (number of patents, GCI, the quality of institutions, innovation, corruption and trust in the legal system) reveal a tight positive relationship to each other.

Table 3: Correlations between independent variables

	Patents	GCI	Institutions	Innovation	Corruption	Trust
Patents	1					
GCI	0,72	1				
Institutions	0,77	0,89	1			
Innovation	0,76	0,95	0,88	1		
Corruption	0,22	0,18	0,12	0,23	1	
Trust	0,55	0,63	0,57	0,63	0,13	1

Source: own calculations

Correlation stronger than 0,7 can be observed between: a) the innovation and the competitiveness, number of registered patents, the institutions b) the institutions and the patents, GCI c) GCI and number of patents. The six most decisive variables move tightly together. Because of the tight correlations carrying out a multiple variable regression analysis is not reasonable.

4. Calculation: Data and Methods

4.1 Independent and dependent variables

In compiling the database, we relied on Eurostat Structural Business Statistics for SME and population figures, on the OECD for the number of registered patents, on the Index of Economic Freedom by The Heritage Foundation and the Wall Street Journal, on the World Economic Forum for the competitiveness index and its sub-indices, on Transparency International for the Corruption Perceptions Index and on the Global Entrepreneurship Monitor as well as the European Social Survey for individual responses.

4.2 Methods

To reveal the characteristics of the variables and to investigate multiple variable analyses we carried out single variable analyses followed by running multiple variable statistics using the SPSS software. By calculating the correlations our aim was to identify relationships, to categorise accordingly and to explore the quality of the relationships. To this effect, we created a contingency table. As a result of the analysis we selected the six most important determinants and their correlation coefficient as well as the highest scoring factor.

5. Results and discussion

5.1 Theory

While we accept that Schumpeterian innovation is the key to growth our competitiveness analyses could prove Acemoglu's and Robinson's assumption about the definitive role of institutions for competitiveness.

Fukuyama's argument of political rights (trust in the legal system) having an impact on the economic capacity was confirmed; the legal system is included among the six most important variables still, the strength of the relationship (a recognizably positive relationship) is not as robust as the effect the number of patents, competitiveness or innovation have.

Within the framework of this paper we could not affirm the Weberian link between economic performance and religion.

5.2 Empirical data

A detailed review of the correlations contained in Table 1.; their directions, scores and levels of significance

- The bigger a country the lower the number of SMEs and the number of people employed in the SME sector. This negative relationship is most marked in trade.
- The more inherent Schumpeterian innovation is in a country the less likely businesses are to operate as SMEs. The higher the number of registered patents per 100,000 people the higher the SME value per capita.
- Economic freedom has no positive impact on the number of SMEs, this being true especially for trade.
- Competitive countries are not defined by the small business sector. The specific added value however reveals a linear correlation irrespective of the industry involved.
- The variables react to the institutions pillar of competitiveness and the composite index alike.
- The higher the quality of higher education and adult learning the lower participation is in manufacturing and trade but it shows a moderately strong positive relationship with specific added value.
- The relationship between business sophistication and added value is very strongly positive, and especially so in manufacturing.
- Where innovation is dominant specific added value is high in all the three sectors.
- As based on Transparency International's Corruption Perception Index the less corrupt a country the higher the specific added value created by small enterprises will be and, unlike in case of other indicators, the higher the number of businesses in manufacturing and trade, and also the number of employees in those sectors.
- The "weakest link" among the indicators is the Perception of Entrepreneurial Opportunity as measured by GEM having the weakest relationship with the SME sector for all three dependent variables.
- Citizens' trust in their politicians has a markedly positive impact on value added and creates an environment favourable for large enterprises because, finding it stable and predictable, they do not consider establishing new ventures but work hard on what is already functioning.
- If people trust the legal system they are more willing to take on risk, set up small businesses and this provides for a strong positive link with added value.
- Of the selected indicators religiosity is the one that we could not prove to have strong relationships. The relationship is weak even with added value.

6. Conclusion

For the SME sectors of the EU 28 (2005-2013) we found the following:

1. There is a significant negative linear relationship between number of SMEs and the explanatory variables used except for the protection of minority shareholders' interests and trust in the legal system.
2. There is a direct and strongly positive linear relationship between the GDP produced by SMEs and the applied explanatory variables except for religiosity.
3. The number of employees has significant relationships only with economic freedom (positive) and religiosity (negative).
4. **A good institutional framework, trust in the legal system (along with declining corruption) and the willingness to innovate (and later register as patents) brings**

about a competitive economy. Although an economy with higher degrees of competitiveness and freedom has a lower number of SMEs these, even if less in number, account for higher total revenues than in a bad economy.

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The examination of the relationship among capital structure, liquidity and efficiency in SME sector

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Abstract

The aim of our research is to explore the correlations between the capital structure and the different indices of business performance and to describe the financial impacts of the different company processes. Based on our assumptions, establishing the optimal capital structure of a company – by increasing efficiency and profitability – will lead directly the increase of its performance and income. The actuality of the topic is general, as the macroeconomic performance which has a direct impact on international financial processes, is built on the performance of different companies, i.e. the players at microeconomic level. In our paper we highlight the main relations between capital structure, liquidity and efficiency, our conclusions are drawn based on the results of the correlation analyses. The examined sample represents Hungarian small and medium-sized enterprises, because of the specialities and similarities of their operational and financing processes. Our research focuses on the SMEs of two Hungarian regions, Central Hungary and Southern Transdanubia, so the comparison will consider regional aspects as well.

Keywords: capital structure, financial analysis, SMEs

JEL Classification: G32, M10, M21

Introduction

In the past few years there have been more and more opportunities of borrowing for the SME sector so financing as well as examining corporate performance indicators and the compounds of capital structure have been relevant areas of research in this sector.

Our research concentrates on the capital structure and liquidity of the Hungarian micro-, small- and medium-sized enterprises as well as their connection to efficiency. In our opinion creating an optimal capital structure directly leads to increasing profit through enhancing profitability and efficiency. In conclusion, we are looking for the ideal debt ratio with which the performance indicators of the company can reach optimal values.

After the literature review correlation analysis is carried out to find out linkages between the capital structure and different corporate performance indicators based on random sampling.

Literature review

The chapter includes the definitions of indicators used in the empirical examination and also the formulae used in calculations.

Defining liquidity

There are plenty of definitions for liquidity both in Hungarian and international specialist literature.

Michaletzky (2010) defines liquidity as current solvency so a company is liquid if it is able to meet all the liabilities due. Kovács and Mohl (2012) interprets liquidity as a state of a given point in time which is characterised by the balance of debts and the necessary liquid assets

(equity) to meet liabilities. According to this idea an entrepreneur can be regarded liquid and solvent at a certain moment of time if the following imbalance (in monetary terms) prevails in the assets: debts due at a given time (day) \leq value of equity necessary to settle them. The authors also describe liquidity as a human activity. In their view it is not enough if an entrepreneur is able to meet all the liabilities at a given time. It must also be considered whether ability can be turned into a skill. Putting emphasis on the word ‘current’, instant solvency is termed as solvency which is typically used in banking to differentiate it from liquidity. While defining liquidity it is also important to mention ‘transformation into cash’ as an alternative that results in liquidity in addition to instant solvency (and skill).

Issing (2003) interprets liquidity from two aspects by differentiating solvency as the characteristic of the agent of an economic activity including the fact that a company is able to and willing to meet its financial liabilities. From another aspect one more characteristic of liquidity is the rapidity and costs of transforming assets into cash. In connection with this Botos (2013) states that liquidity is not a thing, rather, a relation. “Anyway, if we think of cash, we visualise a coin, banknote or the amount on our account. Liquidity, however, primarily is a characteristic of something although it is also used for denoting a certain amount.” Ács (2011) also highlights the difference between liquidity in its everyday and economic sense, i.e. liquidity does not necessarily mean keeping cash as it is enough to possess such means that can be transferred into cash easily, quickly and at a fair price. According to Williamson (2008) liquidity shows how long the given assets can be sold at market value and how high the expenses of this transaction are. Samuelson and Nordhaus (2012) say that an asset is liquid if it can be transformed into cash quickly with low costs. In the last two definitions the costs of “transforming into cash” also appear, i.e. such transaction costs that can be minimised by efficient management. In a financially well-managed enterprise only the amount of cash necessary to finance the smooth running is prevalent (Kozma et al., 2016) so to ensure liquidity, minimising the above mentioned costs and maximising yields by planning the components of assets and liabilities is a must in corporate life. Borio (2000) also defines liquidity as transforming assets into cash but in connection with the key question of our research on a theoretical level it also highlights the connection between capital structure and liquidity, i.e. he thinks that access to financing can strengthen the liquidity of the company.

In the specialist literature usually there are three indicators to measure liquidity and they can relatively reflect the potentials and degrees of “transforming into cash”.

Liquidity rate (1) is the ratio of liquid current assets and costs due within the year.

If it is smaller than 1, the danger of insolvency is a real threat.

$$\text{liquidity rate} = \frac{\text{current assets}}{\text{short-term debts}} \quad (1)$$

If we reduce the numerator of the fraction above by the value of stocks, we get the acid test ratio (2). In this case reducing the value of the current assets by the value of stocks is not only justified by liquidity concerns but also by the nature of stocks, i.e. their primary function is not ensuring liquidity and meeting liabilities, rather, they are necessary for running the business.

$$\text{acid test ratio} = \frac{\text{current assets} - \text{stocks}}{\text{short-term debts}} \quad (2)$$

By further “fine tuning” the liquidity rate we obtain the so-called cash ratio (3) that can be calculated as the ratio of the most liquid assets, cash and short-term debts. The too high value of the indicator refers to inefficient management and too much liquid and not committed cash in many cases which cannot or just hardly make any return.

$$\text{cash ratio} = \frac{\text{cash}^*}{\text{short-term debts}} \quad (3)$$

Interpretations of efficiency

While interpreting cash ratio the term 'efficiency' rises as one of the characteristics of asset management. In this part the interpretation of efficiency is in the centre in both senses: when we would like to achieve a concrete objective with the slightest possible costs incurred or when we would like to reach the best possible result with the slightest possible costs incurred.

Samuelson and Nordhaus (2012), the renowned economists, refer to efficiency as one of the most important terms of economics. They define it as follows: in a general sense, an economy is efficient if it provides the most attractive products and services possible to the consumers with its given resources and technology. They also stress that economic efficiency differs from the technological one and sometimes such production methods are worth applying for the sake of economic efficiency that are less efficient from technical considerations. Gyulavári and Hubert (2014) state that efficiency is the dynamic ratio of company performance and the costs incurred to reach performance, which typically characterise the management of the entire company or one of its concrete fields compared to a standard. According to Siklósi (2009) efficiency means the rational and economical use of resources.

Based on the definitions above efficiency characterises company performance and the economical use of resources necessary to reach corporate objectives. The following formulae can be applied (4).

$$\text{general indicator of efficiency} = \frac{\text{yield (return, earnings)}}{\text{expenses (resources used)}} \quad (4)$$

The following indicators of efficiency were used in our empirical research.

$$\text{tangible asset efficiency} = \frac{\text{net revenue from sales}}{\text{value of tangible assets}} \quad (5)$$

$$\text{stock efficiency} = \frac{\text{net revenue from sales}}{\text{value of stocks}} \quad (6)$$

$$\text{capital efficiency} = \frac{\text{net revenue from sales}}{\text{own capital}} \quad (7)$$

The acceptable value of the indicators above is more than 1 and the faster their value increases, the more efficiently run the business is.

Defining the term of capital structure

The objective of our research was to survey the correlations between liquidity and efficiency as well as capital structure. After liquidity and efficiency were defined, this chapter describes capital structure.

Krénsz (2005) defines capital structure as sharing cash flow made by corporate investment between the owners of long-term financial debts of corporate assets. When the financial manager decides on the form of financing a given investment the decision is made on the compounds of the owners of debts. According to Tétényi and Gyulai (2001) capital structure shows to what extent corporate assets are financed from long-term debts and long-term equity. In other words, it is the combination of the capital sources of the owners and creditors, or the compound of corporate liabilities.

Shareholders' equity (capital) is the monetary and non-monetary contribution of the members and shareholders of the enterprise and part of the earnings after taxes that are not paid in the

* cash= current assets- stocks- debts

form of dividends. However, debts are used in exchange for interest with a liability of paying it back within a certain period of time to the creditors.

It can be seen from the definition above that both capital forms have costs: that of the equity is the yield expected by the creditors and investors, the dividends of the shareholders while the cost of debts is the interest for using money. As a conclusion, among others the cost of obtaining sources must be optimised when defining the ratio of optimal equity/debt of the enterprise (Illés et al., 2015). When creating capital structure an important issue is minimising capital costs and in terms of liquidity maximising yields is prioritised with maintaining solvency, which can contribute to improving economic efficiency. (Dunay & Illés, 2013)

There are two indicators which are widely accepted to measure the ratio of equity and debt in practice as well as in the Hungarian and foreign literature. They are the following.

$$\text{equity ratio} = \frac{\text{equity}}{\text{total liabilities}} \quad (8)$$

The higher the ratio, the less indebted the enterprise is and the lower its financial risks are. It can be stated that credit opportunities were less utilised and when creating the financing structure of future investments there is more room but the opportunities of the so-called tax shield effect* are not used to a great extent.

$$\text{debt/ equity ratio (D/E)} = \frac{\text{debts}}{\text{equity}} \quad (9)$$

The ratio expresses the proportion of debts to equity. Its interpretation is the reverse of the previous indicator, i.e. its high value refers to the indebtedness of the company with high risks. (Fazekas et al., 2003)

Data and Methods

In our empirical analysis the relations between the capital structure, liquidity and efficiency of small-and medium-sized enterprises in the processing industry are surveyed with respect to their geographical position. Our hypotheses are tested and conclusions are made on the basis of the data of the balance sheets and profit and loss accounts of 200 enterprises selected randomly by using correlation analysis.

Results and Discussion

The following hypotheses were drafted based on our findings and experience per region.

H1: The liquidity of the enterprise increases with increasing the ratio of debt.

H2: There is a correlation (a positive one) between capital efficiency and the ratio of equity.

In order to notice the regional differences calculations were made separately on the 100-100 enterprises of South Transdanubia and Central Hungary, respectively.

Table 1: The matrix of correlation coefficients in the Central Hungarian region

	liquidity rate	acid test ratio	cash ratio	D/E	equity ratio	capital efficiency
liquidity rate	1.000					

* The reducing effect of the interest due on debt on the basis of corporate tax

acid test ratio	0.993	1.000				
cash ratio	0.927	0.938	1.000			
D/E	-0.134	-0.121	-0.094	1.000		
equity ratio	0.432	0.429	0.350	-0.363	1.000	
capital efficiency	-0.132	-0.103	-0.086	0.519	-0.185	1.000

Source: authors' own editing based on primary data

No correlation was detected between the liquidity and capital structure as well as efficiency indicators in any regions, and with the exception of one case the value of correlation coefficient (r) did not reach the value of 0.2 that supposes a loose connection. The exception is the correlation coefficient expressing a loose connection between liquidity and equity ratio ($0.2 \leq |r| \leq 0.45$) in the Central-Hungarian region (Table 1) but no relevant correlations can be formed on its basis.

Table 2: The matrix of correlation coefficients in the South Transdanubia region

	liquidity rate	acid test ratio	cash ratio	D/E	equity ratio	capital efficiency
liquidity rate	1.000					
acid test ratio	0.998	1.000				
cash ratio	0.750	0.749	1.000			
D/E	-0.093	-0.086	-0.148	1.000		
equity ratio	0.018	0.017	0.009	-0.122	1.000	
capital efficiency	-0.104	-0.095	0.101	0.765	-0.127	1.000

Source: authors' own editing based on primary data

However, regarding D/E ratio on capital structure and capital efficiency significant results were obtained. On the basis of the data of the South Transdanubia region a positive, almost strong correlation of medium strength ($r=0.765$) could be detected (Table 2). Approximately with the same rate of increasing D/E rate there is an increase in the revenues per unit equity. In other words, the higher the ratio of debts in financing an enterprise, the more efficiently run its equity is.

The findings of our previous research also support the above-mentioned facts where there was a medium strength correlation ($r=0.52$) between the return on investment and the D/E ratio of the South Transdanubia region (GYURCSIK - PATAKI, 2016). The same indicators of the Central Hungarian sample show weaker correlations*.

The characteristics of the sample as of the D/E ratio were examined to find some explanations of deviations and the results. (Table 3)

* the correlation coefficient of D/E and ROE = 0.519; the correlation coefficient of D/E and ROE = 0.23

Table 3: The descriptive statistics of the D/E ratio of the sample

	Central Hungary	South Transdanubia
average	1.76	1.12
median	0.65	0.63
deviation	5.05	1.89
extent of deviation	55.80	18.12

Source: authors' own editing based on primary data

Based on the average of the D/E ratios it has been concluded that the small-and medium-sized enterprises of South Transdanubia finance their activities from the same proportion of equity and debts while the amount of debts is nearly twice as high as that of equity in Central Hungary. Our last statement must be handled with some restrictions due to the values of deviation, extent of deviation and median but takes us closer to the explanation of the results of correlation analysis.

On the basis of our examination the hypotheses are tested as follows.

Our first hypothesis according to which the liquidity of the enterprise is growing in line with the increasing ratio of debts *is rejected*. With regard to the fact that while supporting Krénusz (2005)'s analysis and rejecting the view of Borio (2000) (see Part 2.1) there was no significant correlation found between the indicators of liquidity and capital structure.

Thesecond hypothesis on capital efficiency and the ratio of equity *is modified* as follows: to a certain level the return on equity increases with the increase of the debt/equity ratio.

Conclusion

Based on our empirical research it can be concluded that in the case of the high ratio of debts to equity there is a lower level correlation between the values of the D/E ratio and equity efficiency (or ROE) while correlations between D/E ratio and equity efficiency and ROE are detected at enterprises with lower leverage.

To sum up, reaching a certain level of debt/equity ratio the efficiency of equity (ROE) increases in line with the increase of debt ratio but after reaching this ratio indebtedness arises.

However, it is important to note that in order to generalise our findings further details are necessary by increasing the number of items in the sample or approaching issues from different aspects.

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Economic analysis of options for financing self-employed individuals in their post-productive age in the Czech Republic

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Abstract

A social security system is one of the main areas of interest of every economically developed country. The aim of this policy is to maintain of a reasonable standard of living, or the provision of economically inactive part of a population. However, this positive fact brings, in a current era and unfavourable demographic predictions, increasing of public expenditures on social security and the issue of future stability of social systems is becoming more discussable across all social levels. This publication aims to test the possibilities of financial securing of self-employed individuals, in the Czech Republic, for the post-productive age. Including assessment of the strategy of the Ministry of Labour and Social Affairs applied in February 2016, by sending out of letters, in which were entrepreneurs warned about potential future adverse situation, with a recommendation of an increase of the advance payments into social insurance, for ensuring of an adequate standard of living in their retirements. Conducted survey highlights the economic inconvenient of recommended strategy for particular self-employed individuals, opposed to almost every form of alternative long-term investments. Thus, it critically evaluates the strategy of the Ministry and states concrete reform steps and parametric measures, which postponement could send a false message into society, about mastering of their future financial situation by the state.

Keywords: Long-term investment, pension system in the Czech Republic, securing for retirement age, self-employed individual

JEL Classification: G31, D14, E22, E62, J11

1. Introduction

A social security system, which includes the provision of social guarantees for citizens of a state, after they reach the post productive age, is one of the main areas of interest of every economically developed country, demonstrated by Cudworth, Hall, and McGovern (2007), Bekemans (1985), Harris (1998), Lee and Chang (2006) and Kaskarelis (2009). The aim of this policy is to maintain a reasonable standard of living, or making a provision for the economically inactive part of a population. However, this positive fact brings, in present day, an increase in public expenditures on social security, in most developed countries and the issue of social security is discussed ever more intensively across all social levels, as has been shown (Besanko & Malik, 2017).

The reason for these debates, in the vast majority of OECD countries and the European Union, is in this regard the adversely evolving demographic situation, which is due to the declining birth rates on the one hand and aging population on the other hand, described by Holland, McDaniel and Zimmer (2014) and Kaskarelis (2009). In the long-term perspective, the current pension systems are therefore becoming unsustainable and unstable (Bekemans, 1985; Laborde, 2005; Kaskarelis, 2009). Suitable anchoring of such a pension system, and thus the security of a decent life for people in retirement in conjunction with minimizing the financial burden on people in productive age, is part of the rhetoric of almost every upcoming legislative power, across all those countries (Nepp, 2017).

In the Czech Republic, where the balance of the pension account has been in the negative numbers for a long time, even after the reform of the pension system in 2013, this topic is still open. Specific strategies are logically distinct within the political spectrum. This article discusses in detail one of these strategies, specifically with the process of the Ministry of Labour and Social Affairs as from February 2016. The strategy consisted of sending a mass letter to all self-employed individuals (performing self-employment as the main activity), where the Minister of Labour and Social Affairs, Mrs. Michaela Marksová familiarized entrepreneurs with possible financial scenario that may occur, after reaching the retirement age, in case of contributing the minimum advance payments into social insurance. This strategy, which aimed at increasing the share of self-employed individuals in the total income of the pension account, did not meet with great success. The Czech Social Security Administration states that there was an increase in these contributions in only a very small, almost negligible number of entrepreneurs (according to the statement of spokeswoman of the CSSA Jana Buraňová).

Therefore, this article focuses on the possible causes of the failure of this strategy, and considers potential solutions of this problem concerning the self-employed individuals in the Czech Republic. This publication deals with the issue from the perspective of the state, that means the relevant legislature and legislative power. Based on the substance of the mentioned range of issues, and therefore the options that self-employed individuals have within their assurance for their post-productive age, the research described in the following sections, has focused on the comparison of overall profitability and attractiveness of the state pension system and the alternative, individual long-term investments. From this analysis and research are then derived recommendations for adapting the government's social rhetoric, or specific measures within the range of issues, in the context of the selected population.

1.1 The first pension pillar as an investment and the recommended strategy

The self-employed individuals can, in contrast with employees, positively affect the amount of their future pension payments by increasing the voluntary higher advance payments of social insurance. Thus, they can increase their future pension, even if they do not achieve sufficient revenues, namely personal assessment base for a certain period, or for the duration of their gainful activity (Czech Parliament [CP], 1995).

Factors that affects the amount of pension and therefore factors entering into subsequent calculations are: personal assessment base, period of social insurance, the amount of voluntary contribution into the social insurance, the average time of drawing of pension (derived from the average life expectancy of the population in the Czech Republic according to the Czech Social Security Administration data). The letter contained a table pointing to an increase in pension annuities, in the case of doubling and quadrupling of mentioned minimum deposit:

Table1: The amount of monthly pension with higher than minimum payments into the pension insurance, for year 2016, found by Ministry of Labor and Social Affairs, (2016)

Multiple of the minimum insurance	The level of payments per month (2016)	Amount of pension
1	CZK 1,972	CZK 5,768
2	CZK 3,944	CZK 9,136
4	CZK 7,888	CZK 11,751

Source: Letter of Minister Mgr. Michaela Marksová for self-employed individuals

Note: Calculated to the insurance period of 45 years with an appropriate multiple of the minimum pension insurance and with time of business from 1990 to 2014 in the Czech Republic.

From Table 1 it is seen a regressive dependence of the entering factor (monthly fee), and from the system exiting factor (the amount of pension at retirement age). Clear evidence is only twofold increase in retired after a four-fold increase of monthly payments. Taking into account an average period of savings, or more precisely the average length of pension insurance (45 years for the self-employed individuals in the Czech Republic) and average time of drawing a retirement pension thus 24 years (the figure quoted by Czech Social Security Administration for the year 2015), is apparent conversion of positive balance (acquired pension during life minus sum of payments into the social insurance) of return on invested funds into the negative balance (see. Table 2).

Table 2: The total balance according to multiple of the minimum payments into the pension insurance

Multiple of the minimum insurance	The level of payments per month (2016)	Amount of pension	The total balance	Annual Interest Rate
1	CZK 1,972	CZK 5,768	CZK 569,304	1.83 % p.a.
2	CZK 3,944	CZK 9,136	CZK 501,408	0.90 % p.a.
4	CZK 7,888	CZK 11,751	CZK -875,232	-20.55 % p.a.

Source: Author's computations

Note: Amount invested into the pension insurance is calculated for period 45 years. Drawing of social insurance is calculated for 24 years.

Table 2 highlights the inverse relationship between the payments into the social insurance and the overall average profit. Specifically, by increasing of the advance payments to social insurance, decreases overall profitability (after a certain level occur to lost). This fact highlights the potential disadvantages of Ministry recommended strategy, at least in cases of voluntary increase of contributions to social insurance to four times higher amount than is the minimum specified by the law.

In contrast, the riskiness of the investment is relatively low. Nevertheless, it should be noted that with regard to demographic predictions and long-term unsustainability of the current settings of the pension system of the Czech Republic, there is a high probability of changing of the settings of individual determinants. It is therefore at the discretion of a particular participant, whether he or she wants to increase or decrease his or her dependency on the state pension system.

1.2 Strategy of strengthening of the first pension pillar

If neglected socio-political implications arising from the recommendation of a potentially unfavourable strategy for the citizens of the state, arises the question whether the chosen strategy, thus an efforts to strengthen of the first pension pillar was strategically advantageous procedure, especially in the long-term perspective.

Strategy of the Ministry of Labor and Social Affairs is in general agreement with Stauvermann and Kumar (2016), who describes the PAYG system (the same system as used by the first pension pillar in the Czech Republic) in a small open economy, faced with an aging population, as sustainable.

Increasing life expectancy leads to a higher propensity to savings and therefore reform measures within the PAYG system are not needed. The real source of the problem for the pension system is not PAYG itself but population groups, such as for instance self-employed individuals who are involved in this system minimally (Stauvermann & Kumar, 2016).

However, it should be noted that different approaches emphasize different kinds of variables, when simple measures, such as the mass distribution of the letter for entrepreneurs and the effort to strengthening of the first pillar, may not take into account all factors. One such a factor is the motivation of self-employed persons to voluntarily increase of advances within the PAYG system. Their lack of interest can be based on several factors such as: The transfer paradox in a pay-as-you-go pension system described by Hamada, Kaneko and Yanagihara(2017) pointing out the disadvantageous for contributing participant, fiscal imbalance described in the article by Castro, Maria, Félix, and Braz(2016) and so forth.

If is applied for the Czech Republic environment The Melbourne Mercer Global Pension Index, the final evaluation gets along the level D. Which states: “A system that has some desirable features, but also has major weaknesses and/or omissions that need to be addressed. Without these improvements, its efficacy and sustainability are in doubt.” (Mercer, 2016, Melbourne Mercer Global Pension Index). As problematic parts then indicate a high ratio of a reliance on PAYG system including its solidary settings and the absence of additional fund-oriented pillars.

The result thus generally agrees with the recommendations of the World Bank (2005) on a multi-pillar pension system arrangements, specifically the five-pillars system. Consensus in order to increase of the variability of the system is also with the OECD (2001), that establishes a pension system of three tiers.

Conflict of opinion within the applicability between the Ministry of Labor and Social Affairs, Stauvermann and Kumar (2016) and other listed authors and institutions is a subject of studies of this article.

2. Data and Methods

This research aims to test a range of options for the financial security of self-employed individuals in the Czech Republic, in their post-productive age, by comparison of the state pension system with private savings in the form of long-term investment. From a methodological point of view, the research can be considered as a describing qualitative research, primarily divided into three parts.

The first part is based on a secondary analysis of sources, historical data synthesis in collocation with the financial burden on the economically active population, based on the basis of a hypothetical-deductive method. The end of this section is made by application of the Melbourne Mercer Global Pension Index.

The second analytical part is developed on the basis of case studies and economic analysis, specifically horizontal ratio analysis, where are used indicators evaluating long-term investments. Specific evaluation criteria, which classified the pension system in the Czech Republic and alternative forms of securing on the post-productive age, are based on the theory of investment triangle, from where are also both parts mutually compared. Within case studies of alternative forms of securing for the pension age were analysed following types: Properties, Shares, mutual funds and bonds, Term deposits, savings accounts and cash, Commodities and collectibles, Green investments, Own business. All subsequent types of possible securing on a pension age were subjects of a risk analysis. There were, for determining of significances of factors, both subjective and objective, set out the long-term volatility, trend factor, time and ensuring or guarantee.

The third research part deals with an empirical research specifically simulations and an opinion poll. The option poll has a form of qualitative research, specifically semi-structured guided interviews, based on Hendl's typology. The research was conducted with representatives of the

Czech Chamber of Commerce and the Ministry of Labour and Social Affairs. The reason for choosing of these two institutions was based on the critical evaluation of current and potential future situation, both from the perspective of representatives of self-employed individuals and in terms of representatives of the state legislative system.

3. Results and Discussion

Self-employed individual, who is considering a voluntary increase of social insurance advances to double of the minimum (compared to an increase of four times of the minimum is still profitable), should decide, within the acceptance or rejection of this strategy, according to his or her age. Specifically, from when, he or she has decided to start with a creation of their financial reserve. In cases of later beginning of the creation of financial reserves could be the Ministry recommended strategy more profitable, as it is shown by Table 3.

Table 3: The amount of 24-year annuity while saving CZK 1,972 per month

Annual interest rate	0.5%	1%	2%	4%	6%	8%
Amount saved	CZK 497,644	CZK 523,687	CZK 584,339	CZK 723,280	CZK 911,145	CZK 1,161,548
Monthly rent	CZK 1,942	CZK 2,044	CZK 2,268	CZK 2,823	CZK 3,556	CZK 4,533
Monthly pension with rent	CZK 7,710	CZK 7,812	CZK 8,036	CZK 8,591	CZK 9,323	CZK 10,301

Source: Author's computations

Note: Calculations are counted with savings over 20 years (from year 2016) and rent drawdown of 24 years. During the using of rent is used funds saved appreciation of 1% p.a.

The case illustrated by Table 3 is representing self-employed individual, who decided to invests CZK 1,972 per month to various alternative forms of investments. Then also pays the statutory minimal payment into social insurance i.e. CZK 1,972. This investment is equal to the same situation as increasing payments to twice of the minimum pension advances. However, in this case, if it is assumed that the statutory retirement age for self-employed individual is 65 years, then it means that the beginning of his or her savings for retirement, is in 45 years of age. Which is a later than usual start of the savings to retirement age. Nevertheless, it is evident that, under current conditions, could be an increase of the advances to twice of the minimum social insurance for self-employed individuals more profitable. In this case, it would be preferable to saving alternatively, only in cases where the self-employed individual would be willing to take the risk, associated with an annual interest rate of 6% or more. Significantly more unambiguous result is in the case of an earlier start of creation of financial reserve for old age. The most frequent beginning of saving on retirement age is for people over the age of 30 years. In this case, the time of savings is equal to 35 years.

Table 4: The amount of 24-year annuity while saving CZK 1,972 per month

Annual interest rate	0.5%	1%	2%	4%	6%	8%
Amount saved	CZK 904,925	CZK 991,192	CZK 1,198,084	CZK 1,801,877	CZK 2,809,529	4,523,536

Monthly rent	CZK 3,532	CZK 3,868	CZK 4,676	CZK 7,032	CZK 10,965	CZK 17,654
Monthly pension with rent	CZK 9,300	CZK 9,636	CZK 10,444	CZK 12,800	CZK 16,733	CZK 23,422

Source: Author's computations

Note: Calculations are counted with savings over 35 years (from year 2016) and rent drawdown of 24 years. During the using of rent is used funds saved appreciation of 1% p.a.

Drawing of the rent for 24 years, is determined according to data of Czech Social Security Administration, which this period referred to as the average time of drawing a retirement pension for the year 2016. To increase of the meaningful value of the simulation, are financial funds appreciated also during using of them, by 1% per annum, since it is assumed, the subsequent very safe manipulation with the funds, even after reaching of the retirement age of a citizen. From the simulation results, shown at Table 4, arises an alternative form of investment after addition of the pension and annuity, more profitably in comparison with an increase in advances of social insurance, even within very conservative and safe products with a corresponding appreciation of deposits of 0.5% p.a.

In the vast majority of cases, is Ministry announced recommendation for self-employed individuals disadvantageous. The average annual appreciation of 0.5% can be obtained within all investigated alternative types of savings, including reducing of dependency on the state and also an increase of protentional liquidity of funds.

As is evident in previous simulations a crucial role, in deciding between both types of securing on the pension, plays an age in which a self-employed individual decides and begins with financial preparation, in a form of regular investing of funds. An important factor in this decision is the fact of frequent alternation of legislative power in the Czech Republic and therefore probable changes within the conditions in upcoming time. Especially with regard to the demographic trend in the Czech Republic, can be expected long-term decline of pensions (some estimates suggest half amount of income in comparison with current amount). Therefore, reducing of dependency on the state is important deciding factor in the decision-making process.

3.1 Proposals and recommendation

Based on the survey, it is evident that self-employed individuals and especially younger ones has no incentive to voluntary increase of social insurance advances. Their behaviour would be in that situation economically irrational. Also, because of this, is the article in favour of the publication by Hamada, Kaneko and Yanagihara(2017), when within the current setting of PAYG system and maintaining of the level of replacement ratio, would create the situation, that the self-employed individuals, who pays a minimum advance payment into social insurance, thus it can be concluded that those people are not creditworthy ones, that they would be subsidize, through the system, a current economically inactive population, at the expense of their future profits. This would continue with deepening of an inter-generational inequity and fiscal imbalances described by Castro, Maria, Félix and Braz(2016).

Despite the understanding of intention of the Ministry of Labor and Social Affairs, the author concurs with the publication of authors Bonenkamp, Meijdam, Ponds and Westerhout(2016), describing that the best way to facing population aging is more extensive pension reform. Instead partial and for the vast majority of the studied group demotivating proposals.

The form of this reform is based not only on the results of Melbourne Mercer Pension Index,

but also rises from recommendations of institutions mentioned in the introduction. Under current state, self-employed individuals have almost no alternatives within the state pension system. By increasing of the variability through adding of the third pension pillar, it would extend their possibilities. Specifically, the fund-oriented pension pillar, which is essentially exonerated from demographic aging. Its character would be mandatory with necessity of the calibration of the whole reform model. Specifically, with parametric adjustments of the first pension pillar. In order to increase of the variability of the pension system was to come to the common consensus of the both interviewed institutions. Specific setting of the mentioned pension reform is beyond the scope of this publication, which is primarily focusing in finding of problematic areas of the applied strategy and outlining possible future direction of social and pension policies.

4. Conclusion

On the basis of research and data analyses conducted by this thesis author it can be concluded that the topic of financial security for persons in the post-productive age in the Czech Republic, is more relevant than ever before. This concerns especially the self-employed individuals for whom the risk of poverty in their pension age, is very high. However, this is likely mainly in the event they fail to create an adequate financial reserve during their economically active years. This scenario was highlighted by the Ministry of Labour and Social Affairs to entrepreneurs by sending out a letter in which self-employed individuals were made aware of this possible situation. The letter also included an introduction to some suggestions as to how to prevent this potential problem. Nevertheless, despite understanding the intention of this strategy, the author of this thesis evaluates this step as ineffective and inadequate to deal with the issue. The following text summarizes the main points and presents arguments that support this viewpoint, including the reasons advocating the recommendations and proposals, described in the previous chapter.

Protentional unsustainability is due to the risk of financial imbalances in the PAYG system which provides a base for the vast majority of the pension security of population of the Czech Republic, including its specific extreme solidarity settings. While maintaining the level of the replacement ratio, it creates a demographic prediction of such a high pressure on the long-term financial sustainability of pension insurance, that there is a probability of its total collapse. Partially a factor of migration is positively affecting the overall sensitivity of the scenario and, on the overall balance of the pension account, however it will have a minimal impact, even in the case of very positive scenarios, demonstrated by Jaumotte, Koloskova and Saxena (2016). From the indication of the future situation arises the necessity of reform measures against the partial strategies that are supporting and advocating the current status of the pension system.

The author's analysis and follow-up simulations have shown a higher profitability of alternative forms of financial security in the post-productive age. When compared with the voluntary increases in pension advances, they bring attention to the inefficiency of the strategy implemented by the Ministry of Labor and Social Affairs. The assumption is that the self-employed individuals who, rather than relying on the state, had decided to rely on themselves in respect of their livelihood, are better able to evaluate the overall profitability of both strategies. Thus, a negative result for the first state pension pillar may lead to an increase of distrust in state institutions and the pension system as such.

The long-term government policy has concentrated almost exclusively on increasing the minimum pension advances, arising from the same percentage level of wages and increasing the maximum assessment base. These actions do not give entrepreneurs any alternatives and from the long-term perspective they just underline the low flexibility of these measures.

When the future demographic development is considered, it is clear that only the continuous strengthening of the first pillar evaluated by the author in respect of the of self-employed individuals' motivation, as insufficient.

The described possible pension reform should be able to reduce the risks of the PAYG system, which can occur in future and to stabilize the pension system in the Czech Republic in terms of fiscal sustainability.

Successful application of the pension reform would require a significant social consensus and support of interested subjects across the political spectrum and a greater awareness among the population, both in terms of potential future scenarios and in terms of potential benefits resulting from this reform. However, it should be noted that the outlined pension reform does not provide higher pensions within the PAYG system, but offers an alternative to a compensation in the form of a fund-oriented pillar. This publication is so compared to partial solutions, in favor of the complex steps, resulting from unfavorable demographic development, as well as unattractive offer within the current parameters settings of state pillars, with regard to their urgency.

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Business activities of the municipalities as the important factor of territorial development

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Abstract

After 1990, the municipalities gained the independence in the management and the decision-making, which in practice means that they can make independent decisions and to carry out all activities related to the management of the municipality and its property. The form of use of the municipal property is governed by Act No. 138/1991 Coll., which provides, that municipal authorities and organizations are required to manage the municipal property for the development of the municipality and its inhabitants and for the protection of the environment. By law, municipalities acting as legal entities, so have similar possibilities to use the property as legal entities in the private sector. Municipalities can to gain the part of its revenue from business and also to create a competitive environment for other businesses. They also participate for the activities, which are needs for life of the municipality. However, unlike the private sector, which ones the major part of its property using for producing the profit, the bulk of the municipal property is ensure for its competences and public needs imposed on them by laws, both for the inhabitants and also for businesses allocated in the municipality. Business activities allows for the municipalities to enter into cooperation with other municipalities, in solution such the development programs, which does not prove them by own resources to realize (eg. construction and management of the municipal dump of the waste). Aim of this paper will be evaluate the efficiency of the use of the municipal property by means of the comparison between income from business and the value of the municipal property.

Keywords: business activities, municipal property, revenue from business and own of the municipal property

JEL Classification: H25, M21, R10

1. Introduction

One of the endogenous factors of development of each municipality is the municipal property. Based on the article 20 of the Constitution of the Slovak Republic, everyone has (including municipalities and cities) the right to own property and is guaranteed the same legal content and protection of property rights of all owners. The process of creation of property is a continuous process and also the form of its acquisition during the period from 1990 to the present day to significantly changed. In 1990, the self - government was integrated with the state administration and created a public administration, which was managed in its entirety by state. Self -government during this period carried out regional, provincial and local national committees. National committees depending on a higher level, combined the functions and activities of the local self-government with the activities and functions of state government. After 1990, changed the model of public administration from the centrally system to the dual system, which in practice meant, that there was a functional and organizational separation of self - government from the state government. Municipalities received independence in governance and decision-making.

1.1 Municipal property and municipal ownership

Ownership is an important economic category, which is the basis of social and economic relations. It is one of the factors which influence the process by humanity on nature in obtaining material goods, through which they satisfy their material needs, and to create the conditions for satisfaction of the immaterial goods (Švantnerová, Kožiak, 2005). Municipal ownership by Belajová, Balážová (2004) binds for a specific populated area, while the ownership relationship between of the individual to the municipal property, cannot express the concept of collective ownership or co-ownership, because it is the ownership of the territorial community without entitlement of individuals for property settlement for example if inhabitant moving out from the municipality, and so on. Property and property rights of municipalities are also defined in Article 65 of Title IV of the Constitution, which stated, that the municipality is a legal person and under the conditions provided by law independently manages its own property and its financial funds. From a legislative perspective, the municipal property is defined in § 8 of Act No. 369/1990 Coll. about municipalities, in which it is stated, that the municipal property forms things owned by the municipality, the municipality property rights and property rights of the legal entities established by municipality. Adoption of the several laws, that address about the municipal property and which are established basic rules about the things of the property of the Slovak Republic passed into the ownership of municipalities (eg. Law no. 369/1990 Coll. about municipalities, Act No. 427/1990 Coll. the transfer of ownership of the state to some things on other legal or individual persons and Act No. 138/1991 Coll. about municipal property) gave municipalities' basis for the provision of the original competencies and the later also transferred competencies. The existence of the property is one of the base of the performance by self - government. This is also confirmed Kožiak (2002) who states, that the property is an important economic tool on the level of self - government, through which it is possible to interfere or influence economic events in the municipality, in some cases even exceeding the territory of the cadastral area of the municipality. It is not in conflict with any law, and also it may be positively, in certain situations, but also sometimes it may be negatively for the territory of the municipality (eg. construction of the shopping center, hypermarket, locating large investors and so on.).

Municipalities may acquire property in accordance with Belajová, Balážová (2004) in several ways: as the transfer from the state by law; buying or exchanging; own investment and business activity; as gift; expropriation for public purposes or by concession contracts. Similarly, also the municipalities in the Member States of the European Union may acquire property in several ways: original acquisition ie by capital construction - if financial funds were obtained also with the participation of the state, in its usability bind the restrictions contained in the rules (using, change of purpose, the obligation to maintain the property in proper condition, etc.); forms of secondary acquisition: - purchase of property on the market, while it must be ensured impartiality choice (award of public contracts), inheritance or donation; specific forms of acquisition - the legal transfer of state property to the municipalities, expropriation (applicable only rarely, and then only within the legal conditions and at the right proper compensation) (Widemannová, 2000). Other authors Švantnerová, Kožiak (2005) characterized by four fundamental principles of formation of municipal property: principles of material - clearly expresses, what according to the law becomes the property of the municipality and which of the property does not run over and remains into the property of the state; principle of territoriality - addresses the relationship between of ownership of the immovable property and the cadastral area of the municipalities; historical principle - set historic property, which was owned by the municipality before 31. 12. 1949 and legally transferred to the municipal property (for example forest land, agricultural land); the economic principle to relate with the

management of the municipal property, determining the competencies of local self - government in the management of the property.

Tej (2007) notes, however, that in the principle, if the municipal property is effectively using, the municipality is less dependent by the state budget. It is true, that for the municipality would be easier to collect taxes and fees, than to ensure the proper functioning of municipal businesses. But thereby, the municipality entering to the passive position of an economic agent.

1.2 Business with municipal property

Business by the municipal property to ensure for municipalities the part of its revenue and also to create a competitive environment for other businesses. They also contribute to creating activities that are needed for the complexity of the municipality's services. Business activities allows for the municipalities to enter into cooperation with other municipalities, in solution such the development programs, which does not prove them by own resources to realize (eg. construction and management of the municipal dump of the waste). The use of this form of property may be decided by the municipal council. Andrejovská (2010) assert, that decision how to use municipal property should follow the principles of managing municipal property, the municipality development program or a specific program using municipal property, If the municipality disposes of its property, income from the sale must be used exclusively for development, investment programs, which will generate any additional revenue to replace the loss of property sold.

Property used for business, municipality is committed to allocating, to keep it at the special register and amortized in accordance with the law of the tax of income (Trnavský, 2000).

Methods and tools for business of municipalities by Žárska et al. (2007) are divided:

- Direct support - a group of tools, which directly affect at the basic assumptions of the business, respectively starting a business. It consists of financial and material assumptions. Material support present the investment of the necessary technical and civil infrastructure (transport communications, supply of gas, water, electricity, construction of flats, etc.). Financial support includes pricing policy of the land plot, the tenancy policy on buildings, tax policy (particularly in property tax), financial contributions, grants from the self - government budget and the assumption of guarantees.
- Indirect support - includes marketing of the municipality, municipality rating, advice and information, communication with the entrepreneurs.

Furthermore, the municipality can entrust its property into the contributory and the budget organizations, whose is founder by law No. 523/2004 Coll. on budgetary rules of public administration or to put into commercial companies, non-profit organizations. Municipalities to insert its property into companies, which services is closely linked of the competences of the municipalities imposed by law on municipalities (eg. to ensure of household waste disposal and cleaning the municipality, management and maintenance of public green areas and public lighting, water supply, sewage disposal, etc.), but also into the companies, which, that have nothing with the services of the municipalities. In the first case, the municipality entered into these companies mostly property of the former municipal companies. In the latter case, municipalities to invest into the companies, that are not necessary for municipalities (eg. First Communal Bank, which he founded 61 towns and 80 municipalities). Besides that, the municipality may establish a trading company also as sole shareholder, respectively as the sole companion. In this case, the powers of the General Assembly carries out the statutory body of the municipality, which is the mayor. Most of them are small or medium-sized businesses, which create jobs for local inhabitants. Qineti, Matejková et al. (2011) confirm, that technical progress

is not simply a matter of investing into the physical or human capital, but it is also determined by its institutional environment. Regional development conditional by quality human resources and well-trained experts will be able to bring new ideas into regional development projects (Országhová, 2012). It also confirms Ubrežiová, Horská et al. (2016) who says, that small and medium-sized enterprises have a strong impact on the economy of each country but their development depends on the general state of the national economy and people expect companies to act beyond their legal responsibilities and commonly imagine ethical behavior, environmental protection and high quality of products and services. The problem with the trading company is a large concentration of decision-making powers of the mayor, who on the one hand acts as a statutory body of the municipality and on the other hand acts as a statutory body of the company, which decides about the municipal property in the interest of profit. Also it confirm Sedláková, Vaľovská, (2015) who mention, that negative aspects of the business with the municipal property to relate with the fact that if there is too much focus on the business, which is not a natural starting concept of self-government, must be assumed by the risks associated with the possibility of reporting the loss or bankruptcy. If the risks are too high and the business could violate legal conditions in terms of the need to protect and enhance the property, in this case the municipality should take the path of creating favorable economic conditions for business. But Kantnerová, Pártlová (2014) and also Fiľa, Kučera (2015) reported that profit hold an exalted place in the business world and in economic. The necessity of producing profits imposes order and discipline on business organizations. It fosters cost reducing innovations, which in turn promote the efficient use of scarce resources. The profitmotive also encourage savings and risk-taking, two indispensable elements of economic development.

It follows, that in making such a decision, the mayor may give priority to private interests over the public interest. This form of business can lead to targeted privatization of municipal property. Typical forms of market decentralization is the privatization and the deregulation. In Slovak Republic took place small and large privatization. Just in the first wave of the large privatization gained municipalities gratuitous transfer corporate apartments, dormitories, nurseries, kindergartens and recreational facilities. Unfortunately, in the process of privatization municipalities was unable to obtained all property, that was in its cadastral area and which were interested, because the law on small privatization overtaken the law about municipal property, thereby to broaden its property portfolio. The end result of this process was the fact that a large part of the property of state contained in the cadastral area of municipalities to fell into private ownership. Municipalities lost the opportunity to acquire property that could later serve primarily for business purposes.

By the Gozora et al. (2007) in recent years significantly increased the use of municipal property for the business activities. Municipal business cannot be equated only with the existence of the municipalities' own business or activity of enterprises with the participation of the municipality. In the wider context, municipal business is understood as an activity in which the municipal property is in motion and brings effects either in the form of profit resp. in the cash income or as satisfying the needs of municipality inhabitants, and creating an enabling environment for entrepreneurial activities.

Deciding about the business with municipal property and obtaining revenue by Tóth - Prchalová (2002) is not a negligible fact, because a greater range and higher quality of public services provided in the village, especially in infrastructure, operates on a greater attractiveness of the municipality, the migration of the population and may have the impact on the wider range of private business in the municipality and the evaluation of private and public property in the municipality.

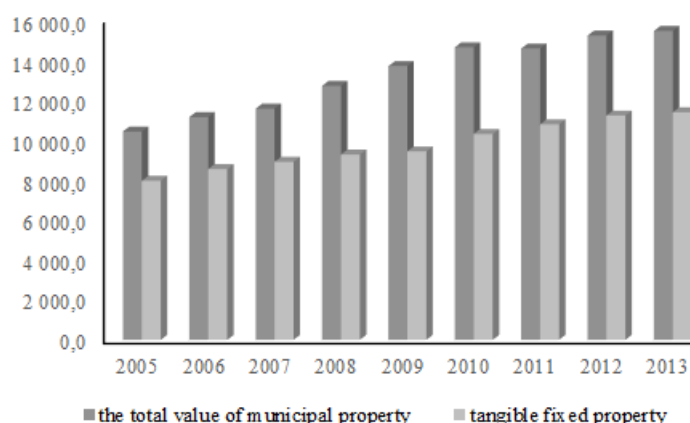
2. Data and Methods

In the economic literature as well as in the practice, rarely occur the results and information which to evaluate complex or partial business with the municipal property. Based on available information we tried to evaluate the income from business with the municipal property in relation to total property and tangible fixed property in time series 2005-2013. The object of the paper were cumulative data of municipalities in Slovak Republic (2 888 municipalities). Database we gained from the state national accounts by Ministry of finance of Slovak Republic. Tangible fixed property according to law No. 595/2003 Coll. about income tax divided into depreciable property which consists of buildings, separate movable things and sets of movable property, perennial crops, breeding and draft animals and other tangible property and depreciated property which consists land plot, works of art and collections.

3. Results and Discussions

The value of municipal property expresses by the cost of property at its creation, acquisition, transfer, and which is to be reduced each year by depreciation related with the wear of the property. Municipalities led by 2003 the value of property at acquisition prices, because they had not an obligation to depreciate property, but from 1. 1. 2003 this obligation was introduced by law No. 595/2003 Coll. about income tax, so that the value of the property became real.

Figure 1: Development of total property and tangible fixed property of municipalities in the period 2005 -2013 (mil. €)



Source: State national accounts, Ministry of finance of Slovak Republic, own processing

Figure 1 shows, that during the period 2005- 2010, the total value of municipal property annually increased. The reason for raising of the value of property was mainly reform of public administration, under which the municipalities gained not only new competencies, but also property to ensure for these competencies. In the point of view, the increasing of the property position of the municipality, the reform of public administration was positive for the municipalities. Change occurred in 2011, when compared to the previous year decreased total property about 60.8 million €, is present 0.42% decreasing. During the next two years annually the value of municipal property grew. The overall increase value of municipal property in 2013 compared to 2010 amounted to 5028.9 million. €, which represents 48.3%. Increasing of the value of property, municipalities ensuring primarily through the investment activities, while the financial resources for these activities ensuring through a loan. From these investing activities creating the obligations, which municipalities must repay. From analysis arising, that during years 2005 - 2013 the value of tangible fixed property annually grew. Comparing the years

2005 and 2013, the value of tangible fixed property increased about 3423.2 million. €, it an increase of 43.04%.

Figure 2: Development of the tangible fixed property and its rate on the total value of the municipal property



Source: State national accounts, Ministry of finance of Slovak Republic, own processing

For business purposes municipalities used primarily the tangible fixed property, which are bound in the buildings and the constructions. These property creating a significant share of the total value of the municipal property so it is important to choose the right strategy for its using, so that brought not only public benefits, but also as the incomes into the municipal budget. The analysis shows, that on the total value of the municipal property tangible fixed property creating average 70% (Figure 2). The municipality has a statutory obligation that first the municipal property must be use for the self-government respectively for public purposes and only the property that is not used for these purposes may be used for business. Many buildings or facilities owned by municipalities have multifunctional uses, which means that building or facility is used for multiple purposes such the performance of self - government and also for business, which is routine in small municipalities. A typical example is the culture house, which often occupied by local authority, by businesses and by interest associations. This problem arises, what purpose this building fulfill. From an economic perspective lease of the municipal property provides to the municipality from the multifunctional use of buildings positives, that the costs associated with the operation of buildings will be to cover from the rent from businesses.

The property, that the municipality cannot use, may be to leave for using to another legal or individual person. This form of use of the municipal property has a contractual character. Thus, the municipality leave for temporary using the movable or immovable property. About this lease to decide the municipal council. Incomes from business largely represent incomes from the lease of municipal property, but not only for businesses entities, but also for inhabitants for example to rent the school gym for sports clubs or dining room for cultural - social events outside school hours etc. Lease of the property for purposes different services is preferable, because the municipality retains control of the service and the private entrepreneur is already in the lease agreement could undertake to comply with certain restrictive conditions. Such this lease is not very popular, because it does not provide long-term certainty from a business perspective (especially if it is not a long-term lease) for entrepreneur.

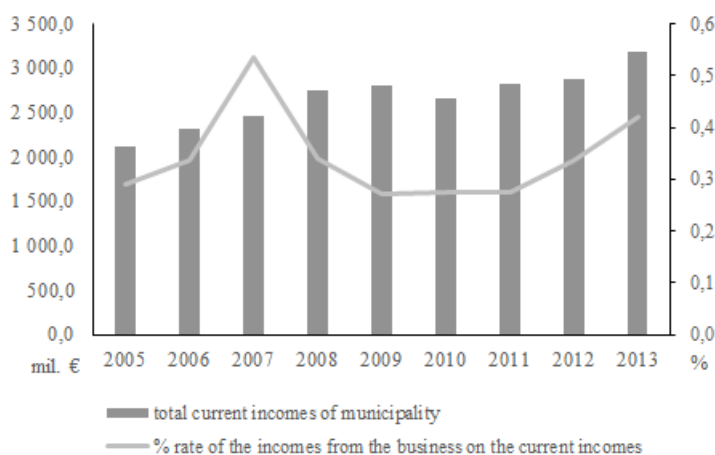
Figure 3: The incomes from the business with the municipal property over the period 2005 – 2013 (mil. €)



Source: State national accounts, Ministry of finance of Slovak Republic, own processing

During the period 2005-2013 showed incomes from business fluctuating trend. In the period 2005-2008, these incomes growing yearly. But already in the next three years business income declined. Since 2011 there was again an increase in incomes from business. Compared to the years 2005 and 2013, however, incomes from business activities increased by 7.3 million. €, which represents more than 2-fold increase. However, incomes that municipalities receive from the use of property in the form of incomes from business (Figure 3) do not cover the full costs associated with maintaining the property, which practically means, that when the municipalities want to maintain own property must to looking for also other financial sources respectively for a big investment activities municipality must to cumulate financial funds by several years.

Figure 4: Development of the total current incomes and the rate of the incomes from the business on the total current incomes



Source: State national accounts, Ministry of finance of Slovak Republic, own processing

Incomes from the business with the municipal property are part of non-tax incomes of the current municipal budget. These incomes municipalities using for everyday operation of the municipality. Although current incomes of the municipality during the period 2005-2013 showed a fluctuating trend, the share of incomes from the business is moving more or less at the same level - 0.3%, with the exception of 2007, when its reached on 0.5% (Figure 4). This

was due to with the increasing of total current incomes and also with increasing of incomes of the business. This low rate of incomes refers to the fact that municipalities are unable to fully exploit the potential of its property. Valorization of the municipal property carries an increased risk of indebtedness of municipalities, because municipalities for the valorization of the municipal property must be put into the project own financial funds, which often do not have and only way to implement the investment plan is to take a loan. In the future for municipalities it could bring more problems than benefits from the use of property.

4. Conclusion

It is an exception (in the case of some big municipalities), when the municipalities make economic analysis, if decide on the use of type of municipal property in relation to alternative purpose of its use. Another problem is the low activity of municipalities in the use of its property for business. Many municipalities, which in its portfolio have also property, that are not used for self-government or public purposes, cannot use this property for commercial purposes. Then such property becomes dubious (unfit) and losing its value. The result of this a process is that reduces the total value of municipal property, but at the same time increases its expenditure associated with the "maintenance" of this property (e.g. remediation, conserved buildings, etc.). From point of view the municipality is to appropriate to obtain and retain ownership "strategic property" for special intentions and for general welfare of the municipality. Concerns in particular, the key land plot and buildings which are suitable for manufacturing and for basic services, which attracting for investors for creating job opportunities.

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Approaches for Measuring Intensity and Quality of Project Management in Industrial Plants

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Abstract

The paper deals with the necessity of the process analysis in the area of project management maturity models that enables level determination in the project planning and implementation. Identified maturity level can be retained or even improve. Maturity models give the opportunity to compare entrepreneurs' level of project implementation and project management with other companies, thereby allowing entrepreneurs to determine whether they are in the area sufficiently competitive or not. Questionnaire survey, comparison of the results with the results of other surveys carried out by reputable companies and comparison of the current use of maturity models were used to process the paper. The organization is ideal in project management when it creates an environment in which there is a continuous flow of successfully managed projects whose success is measured in the interest of the organization as well as the project (customer - user of the project outputs). Maturity or excellence of the organization in project management cannot be achieved without a strategic planning. Achievement of particular level of project management maturity is dependent mainly on the type of the business, the interests of the entrepreneurs and many other factors. It is important that the entrepreneurships determine their own maturity level. Based on the level achieved they are ready to a successful implementation and completion of their projects.

Keywords: project management, maturity models, CMM, OPM3, PRINCE2

JEL Classification: M10, O21, O22

1. Introduction

Project management is greatly expanded abroad and achieved a high level of development in meeting the challenges that are characterized by considerable complexity, unrepeatable and involving the large number of business units and resources. Solving of these challenges it is limited by cost, time and also quality that must be achieved. The use of project management methods has become standards for problem solving of this character. Application of project management is often required by foreign companies in cooperation with the Slovak enterprises. (Dolanský, 1996)

Project management is a new approach to managing the projects with well-defined objective, which has to be achieved in the specified time, costs and quality. By successful project tasks solutions applications of a number of methods, techniques, procedures and tools are assumed in planning, organizing and controlling of the projects (Majtán, 2009). Project management is mainly suitable to be used in managing complex, difficult projects, when to schedule deadlines for realization individual tasks, to allocate the necessary machinery and staff capacity (Hrablik, 2012), or amount of material and estimated costs are needed. It enables to optimize utilization

of human resources, machinery, equipment, raw materials and materials but especially total cost of the project (Hrablik Chovanová&Šujanová, 2009).

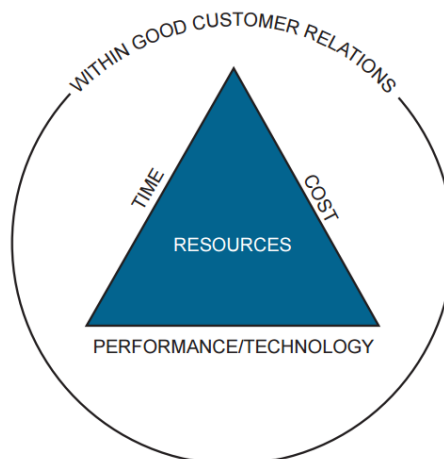
Project management is engaged in projects that have the following main characteristics (Hrablik Chovanová&Šujanová, 2009):

- Projects are complex – go beyond the usual organisational forms, they are disposable and each project is exceptional in its way.
- Projects are supposed to create a specific result – new product, new device, new organisation, etc.
- Projects are often limited – deadline of the start and end are set, while ongoing several phases of the project.
- High uncertainty of the project – character of the project changes from phase to phase, phases are separated by formal approval steps.
- Projects are related to uncertainty over the time and costs.

Successful project management can be defined as having achieved the project objectives within time, costs, at the desired technology level, while utilizing the assigned resources effectively and efficiently accepted by the customer. Project management is designed to make better use of existing resources by getting work flow horizontally as well as vertically within the company.

The representation of project management is shown in Figure 1. The Figure shows that the project management is designed to manage or control company resources on a given activity within time, costs and performance. Time, costs and performance are the restrictions on the project. If the project is to be accomplished for an outside customer, then the project has a fourth restriction: good customer relations (Kerzner, 2013). The costs are defined as the sum of direct and indirect costs attached to different activities in the project (staff, material, services, etc.). Time schedule means any activity having in the project its duration and time followed by other activities. The quality involves qualitative characteristic of the project system or product and their target parameters (Hrablik Chovanová &Šujanová, 2009).

Figure 1: Overview of the project management



Source:Kerzner, 2013

2. Data and Methods

Information from sources mentioned in the literature and author's own experiences was used in this article. Research instrument was questionnaire which focused on different types of companies of different sizes with diverse understanding of project management. Questions in

questionnaire have been compiled on the basis of fundamental groups of processes and circuit of knowledge of project management and they were processed on the base of - A Guide to the Project Management Body of Knowledge (PMBOK® Guide 2000 Edition). Personal interview with project managers polled enterprises we also used in evaluating the level of utilization of project management in enterprises.

3. Project management maturity

By the 1990s, companies had begun to realize that implementing project management was a necessity, not a choice. The question was not how to implement project management, but how fast could it be done? Table 1 shows the typical life-cycle phases that an organization goes through to implement project management. In the first phase, the Embryonic Phase, the organization recognizes the apparent need for project management. This recognition normally takes place at the lower and middle levels of management where the project activities actually take place. The executives are then informed of the need and assess the situation. There are six driving forces that lead executives to recognize the need for project management (Kerzner, 2013):

- Capital projects.
- Customer expectations.
- Competitiveness.
- Executive understanding.
- New project development.
- Efficiency and effectiveness.

Table 1: Life-cycle Phases for Project Management Maturity

Embryonic Phase	Executive Management Acceptance Phase	Line Management Acceptance Phase	Growth Phase	Maturity Phase
<ul style="list-style-type: none"> • Recognize need 	<ul style="list-style-type: none"> • Visible executive support 	<ul style="list-style-type: none"> • Line management support 	<ul style="list-style-type: none"> • Use of life-cycle phases 	<ul style="list-style-type: none"> • Development of a management cost/schedule control system
<ul style="list-style-type: none"> • Recognize benefits 	<ul style="list-style-type: none"> • Executive understanding of project management 	<ul style="list-style-type: none"> • Line management commitment 	<ul style="list-style-type: none"> • Development of a project management methodology 	<ul style="list-style-type: none"> • Integrating cost and schedule control
<ul style="list-style-type: none"> • Recognize applications 	<ul style="list-style-type: none"> • Project sponsorship 	<ul style="list-style-type: none"> • Line management education 	<ul style="list-style-type: none"> • Commitment to planning 	<ul style="list-style-type: none"> • Developing an educational program to enhance project management skills
<ul style="list-style-type: none"> • Recognize what must be done 	<ul style="list-style-type: none"> • Willingness to change way of doing business 	<ul style="list-style-type: none"> • Willingness to release employees for project management training 	<ul style="list-style-type: none"> • Minimization of "creeping scope" • Selection of a project tracking system 	

Source: Kerzner, 2013

If we want to determine whether a company effectively uses a project management and also effectively manage its projects, we have to know business model of maturity in project management. The degrees of maturity of project management in enterprises commence from the least sophisticated company and on the end of this process is project-oriented company with continuous improvement of its processes. To determine the degree of maturity of the enterprise is necessary to measure the intensity and quality of the application of project management in companies.

A “**maturity model**” is a conceptual framework that describes the characteristics of effective processes in areas as diverse as strategic business planning, business development, systems engineering, project management, risk management, information technology (IT) or personnel management (PMI OPM3, 2008).

Many studies showed that there are many types of maturity models that are developed according to different functions and applications of project management maturity processes. According to Kohlegger et al. (2009), there are over 70 different maturity models that have different characteristics, therefore, it is significant to have clear understanding of each model before developing or revising it. (Kohlegger et al., 2009, cited by Karim, S.B.A. et al., 2014).

CMM (Capability Maturity Model) was one from the first models, which helped and helps organizations increase the maturity of process management of development and maintenance of software. There are other models except CMM (Hrablik Chovanová & Šujanová, 2009):

- PMMM – Project Management Maturity Model, developed by PM Solution,
- OPM3 – Organizational Project Management Maturity Model, developed by Institute for project management PMI,
- PRINCE2 – Project IN Controlled Environments, developed in Great Britain.

Table 2 shows more maturity models currently used, the models are shown in original version with links to websites.

Table 2: Published Maturity Models

Model	URL
A Guide to the Project Management Body of Knowledge	http://www.pmi.org/standards/pmbok.htm
AACE International's Certification Program	http://www.aacei.org/newdesign/certification/certificationprogram/welcome.shtml
APM BoK Review	http://www.apmgroup.co.uk
Australian Institute of Project Management (AIPM). 1996. <i>National Competency Standards for Project Management: Various Volumes, Competency Standards, Level 6.</i>	http://www.dab.uts.edu.au
Software Engineering Institute Capability Maturity Models in general	http://www.sei.cmu.edu
SEI SW-CMM Capability Maturity Model SM for Software	http://www.sei.cmu.edu/cmm/cmm.html
SEI SE-CMM Capability Maturity Model for Systems Engineering	http://www.sei.cmu.edu/cmm/se-cmm.html
SEI P-CMM People Capability Maturity Model	http://www.sei.cmu.edu/cmm-p/
Microframe	http://www.pm2.com
SPICE	http://www.sqi.gu.edu.au/spice/
Trillium	http://www.sqi.gu.edu.au/trillium/
US Federal Aviation Administration integrated Capability Maturity Model	http://www.faa.gov/
PMA 2000	http://www.leshem.co.il/products/main1.html
Balanced Scorecard	http://www.hbsp.harvard.edu
EFQM Excellence	http://www.efqm.org/
V-Model	http://www.scope.gmd.de/vmodel/en/
Innovation Maturity Model	http://managementroundtable.com/

PRINCE	http://www.pmforum.org/prof/standard.htm#PRINCE http://www.prince2.com/
Programme Management Maturity Model	http://www.e-programme.com/pmmm.htm
PM Solutions' Project Management Maturity Model (SM)	http://www.pmsolutions.com/maturitymodel/whatismodel.htm

Source: Practical Application of Maturity Models

Next maturity models were compared - PMMMSM and OPM3. We compared these two models because they have good availability of documents (information) and it is not so difficult to compare just two models. These analysed models were not include in comparison:

- CMM model - because it is the basis of all reported models (Table 3).
- and PRINCE2 model – model is used "only" in determining maturity in the use of project management methodology PRINCE2 in company and its levels are identical to the first three levels of the model PMMMSM.

Compare models OPM3 and PMMMSM is not easy, because both models have another form of implementation and a description of each model is different. One thing they have in common: models should be used only in those companies where you already know the issues of project management. Everyone who participates in the projects should be completed course (training) from the project management field and know the basic project language, methods, techniques, tools and procedures.

Table 3: Capability Maturity Model - Integrated

Level	Focus	Process Areas	Result
5 Optimizing	Continuous process improvement	Organizational Innovation & Deployment Causal Analysis and Resolution	Productivity & Quality
4 Quantitatively Managed	Quantitative management	Organizational Process Performance Quantitative Project Management	
3 Defined	Process standardization	Requirements Development Technical Solution Product Integration Verification Validation Organizational Process Focus Organizational Process Definition Organizational Training Integrated Project Management Risk Management Decision Analysis and Resolution	
2 Managed	Basic project management	Requirements Management Project Planning Project Monitoring & Control Supplier Agreement Management Measurement and Analysis Process & Product Quality Assurance Configuration Management	
1 Initial	Competent people and heroics		

Source: Practical Application of Maturity Models

During analysis of models OPM3 and PMMMSM we focused on:

- analysis of the characteristics of the models;
- analysis of procedures in determining maturity;
- analysis of recommendations for enterprises to improve the level of project management;

- analysis of benefits models.

Table 4: Summary of Models Analysis PMMMSM and OPM3

Analysis	PMMM SM	OPM3
Characteristics of the models.	Five levels of maturity.	Elements: the observation, evaluation, improvement.
Improvement.	Project management.	Project, portfolio and program management.
Method of determining the maturity.	For each maturity level has been created an evaluation questionnaire, on the weighting of individual responses the company ranks the satisfactory level of maturity.	On the basis of lists: best practices, skills, planning improvements.
Recommendations for enterprises to improve.	Expressed by key activities - the company must meet to advance to higher levels.	Summarized in lists: best practices, skills, planning improvements.
Benefits of the models.	<ul style="list-style-type: none"> • detailed planning for logical ways to improve business processes, • recognition of the needs of the project office (PO) and assess their appropriate inclusion in the organizational structure of the company, • ways to develop plans for improving project management, • creating a culture of perfect project management. 	<ul style="list-style-type: none"> • helps businesses to develop and improve the required skills and thus helping to bridge the gap between strategy and successful implementation of projects, • allows businesses to choose the right projects and implement them predictably, consistently and successfully, • provides the basis for improved project management maturity and thus completed projects can lead to successful business planning, • new approaches to project management maturity, the projects are not only due to the operational level, but also at program and portfolio levels..

Source: Own processing

4. Results and Discussion

At present, high demands are put onto Slovak enterprises. Demands have increased by the entry of Slovak Republic into the European Union, which consist mainly in strengthening their competitiveness (Božek, 2014; Straka, 2014). One of the areas that resulted already from several surveys (Gareis, 2007, Kondrátová 2007; Majtán, 2004) and in which our enterprises have large margin compared with foreign companies (Hornáková et al., 2015) is the ability to implement the planned targets within the set deadlines, with limited costs and resources. So

there was just created a space for the application and use of project management, one of the management tools, which is applicable in management of any changes in enterprises.

Therefore, our survey was focused on the following issues:

- characteristics of the enterprises participating in the survey (number of employees, size of business),
- characteristics of projects taking place in surveyed enterprises (number of projects, project team members (Relich et al., 2014), time duration of projects, use of the methodology),
- characteristics of standards and guidelines relating to project management in the enterprise (documentation, organization, templates, etc.),
- statement of the sequence in implementation of projects in the enterprise (Korshunov, 2007),
- software (Bhoola et al. 2014) equipment in the planning and progress of a project (Trebuňa, 2015).

Results of the survey are based on the comparison of the surveys carried out in 2004-2009 (Gareis, 2007, Kondráťová 2007; Majtán, 2004), as well as from the secondary sources of information and from the own survey, which was realized in 2015-2017, during the survey small and medium-sized enterprises (277 in total) in western Slovak Republic (without distinction of companies' production focus).

Based on the responses to the questionnaire and personal interviews as well as having studied several surveys (Gareis, 2007, Kondráťová 2007; Majtán, 2004) in the field of project management, we have come to the following benefits and negatives.

Positives resulting from the survey:

- most enterprises with foreign capital participation (resp. foreign enterprises in Slovak Republic) have project management already well established,
- effort of the Slovak enterprises to implement project management –for solving tasks and problems through projects,
- change in the thinking of the Slovak enterprises towards project management as the source of their strengths and competitiveness,
- some enterprises have established a template for the planning, implementation and monitoring of projects that facilitate and accelerate work on projects,
- most of enterprises documents the entire lifetime of the projects.

Negatives resulting from the survey are as follows:

- enterprises recognize the need of project management as a competitive advantage, but are not doing anything for reaching this competitive advantage,
- enterprises claim that they use project management, but most project managers in those enterprises are just pro forma project managers,
- poor participation in international projects.
- inexperience and lack of knowledge management in the area of acquisition and project management - reluctance and fear of the new,
- low possibility of determining whether the enterprise uses all its capacity to project management,
- uncertainties in project management,
- lack of availability or the ability to appropriate team members, or their coordination,

- problems in communication (Muszyńska, 2017),
- insufficient support from management,
- lack of a compelling vision/strategy.

5. Conclusion

Since the Slovak enterprises realize their business activities in common EU market, it is very important to be prepared and adapted to the common EU market. One of the conditions for successful entry into this market is the use of project management. Using the project management is a matter of course abroad. It is very important to establish whether the company is able to plan, manage the unique and complex projects and constantly improving the project management in its praxis. Project management should become a standard form of enterprise management.

Maturity models are to determine the fact whether the enterprise is ready or not to implement the project management. Also it is necessary to mention the fact that not every enterprise needs to reach the highest level of maturity. Achievement of a particular level depends mainly on the business activity, the interests and other factors associated with doing business in a particular market. Enterprises should take into account that it is important to determine the right level of project management maturity, and based on it achieving successful implementation and completion of their projects.

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Solving Distribution Problems with Computer Technology

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Abstract

The purpose of the article is to highlight the need and importance of using computer technology to solve distribution problems in logistics, using methods of operational analysis. Logistics is a discipline that deals with the systemic solution, planning, synchronizing, implementation and coordination of material flows and associated information and cash flows from the supplier to the enterprise, within the enterprise and from the enterprise toward the customer. Logistics is focused on meeting the customers' needs and the final effect. The final effect is reached with the highest flexibility, precision and economy. Distribution problems that allow solving tasks related to the distribution of goods are the most frequently used tasks of linear programming in practice. Solution of distribution problems offers information for decision-making on the traffic management within the enterprise, between warehouses, between producers and consumers, in special cases assigning workers by their profession, by construction localization of the new production or storage facilities, or commercial establishments, etc. The paper provides comparison between the two "easily" accessible software tools (QM for Windows, MS Excel Solver), enabling quick and simple solution to the complex distribution problems.

Keywords: logistics, distribution problem, operational research, QM for Windows, MS Excel – Solver

JEL Classification: C44, C88, L91

1. Introduction

Logistics is a discipline that deals with the systemic solution, planning, synchronizing, implementation and coordination of material flows and associated information and cash flows from the supplier to the enterprise, within the enterprise and from the enterprise toward the customer. Logistics is focused on meeting the customers' needs as the final effect. The final effect is reached with the highest flexibility, precision and economy." (Vidová, 2009)

The main features of logistics are summarized on the basis of several logistics definitions: (Vidová, 2009; Gregor, 2004):

- The scope of the logistics is transportation, materials handling and storage of all materials, intermediate products and products on the entire route from the supplier through the enterprise toward the customers.
- The content of the logistics is organization, planning, management, implementation and control of all processes of moving and storage processes in production and circulation, the material flow present the implementation of physical process, and other activities are related to the information flow.

- The role of logistics is the overall optimization of material flow in production and circulation. The tool for optimization is a connection of the individual subsystems into an integrated system. Material flow and related information flow is coordinated and managed in the mentioned system.
- Logistics means not only systematic thinking but also a new organization, with the emphasis on the integration of individual processes and the global view in order to optimize all related processes.

The logistics mainly solves problem of specifying the functional, organizational, personnel and material resources which enable to improve and optimize the information, materials and value flow within the whole enterprise. Thereby logistics acquires integration function. "Logistics can be generally understood as a systematic discipline that deals with overall optimization, coordination and synchronization of all activities. Activity chaining is essential for flexible and effective achievement of the final (synergistic) effects." (Vidová, 2009). According to definition, the scope of logistics is very broad.

In a complex activity like logistics, problem solving by assumptions of a simple cause-and-effect relationship alone is not sufficient. Optimum plan should be derived through the analysis and comparison of many alternative case studies simulating the behavior of logistics organization or processing system under the premises based on present situations or future planning. This means that application of the operational research methodology based on mathematical process is strongly required. (Takai, 2009)

Logistics as an integral discipline does not have its own methodology and use the methods and principles of technical and economic sciences. The most commonly used methods in logistics are divided as follow (Farkašová, 2009):

- The methods mainly used for analysis of the logistics process, and materials movement.
- Mathematical methods of operational analysis.
- Graphic methods (graph theory, method of network analysis, various types of diagrams).
- Simulation methods - simulation can be used for designing the new system, as well as the analysis and elimination of weak points in the production system.
- Methods for planning and forecasting procedures in logistics for the future planning periods.

The methods of operational analysis that are frequently used in logistics, production enterprises including the following methods: the graph and networks theory (scheduling tasks in production logistics), linear programming (**optimization of transport distances, transport costs**, etc.), methods of network analysis, inventory theory models.

2. Operational research

Operational research isn't just another management buzz-word - it's been around since the 1940s. But in our cost-conscious, productivity-driven age, operational research professionals continue to find new ways to use O.R. to increase revenues and profits, streamline processes and save organizations big money. (The guide to Operational research)

The scope of operational research (OR) is the study and analysis of operations and processes that are in progress or planned in a particular organizational unit (enterprise, factory, workshop, etc.) (Hrablík Chovanová, 2012).

For example, Operations Research, or operational research in the U.K, is a discipline that deals with the application of advanced analytical methods to help make better decisions. The terms

management science and analytics are sometimes used as synonyms for operations research.(Strickland, 2014)

2.1 Linear programming

Linear programming (LP) models and methods are used to solve the tasks, for which are typical multivariable solutions and in which can be assumed that among the variables is only linear dependence. According to previous sentence, the subject of LP is the solution of linear optimization problems, which are a special case of the general problems of mathematical programming.

Formulating a linear program involves developing a mathematical model to represent the managerial (logistical) problem. Thus, in order to formulate a linear program, it is necessary to completely understand the managerial problem being faced. Once this is understood, we can begin to develop the mathematical statement of the problem. The steps in formulating a linear program follow (Render et al., 2012):

1. Completely understand the managerial (logistical) problem being faced.
2. Identify the objective and the constraints.
3. Define the decision variables.
4. Use the decision variables to write mathematical expressions for the objective function and the constraints.

General task of linear LP is to determine the vector of variables $\bar{x} = (x_1, x_2, \dots, x_n)$ for which the extreme (maximum, minimum) acquires function z of the:

$$z = c_1 \cdot x_1 + c_2 \cdot x_2 + \dots + c_n \cdot x_n = \max. \quad \text{or} \quad \min. \quad (1)$$

$$\begin{aligned} a_{11} \cdot x_1 + a_{12} \cdot x_2 + \dots + a_{1n} \cdot x_n &= b_1 \\ a_{21} \cdot x_1 + a_{22} \cdot x_2 + \dots + a_{2n} \cdot x_n &= b_2 \\ &\vdots \end{aligned} \quad (2)$$

$$\begin{aligned} a_{m1} \cdot x_1 + a_{m2} \cdot x_2 + \dots + a_{mn} \cdot x_n &= b_m \\ \text{and} \\ x_j &\geq 0, \quad j = 1, 2, \dots, n \end{aligned} \quad (3)$$

The linear function being maximized (minimalized) in this model is called the objective function (1). Them equalities with a linear function on the left-hand side are referred to as functional constraints (or structural constraints)(2), and the inequalities in the bottom row are no negativity constraints (3). The constants (c_j , b_i , and a_{ij}) are the parameters of the model. Any choice of values of (x_1, x_2, \dots, x_n) is called a solution, whereas a solution satisfying all the constraints is a feasible solution, and a feasible solution that maximizes the objective function is an optimal solution.

The applications of linear programming have been remarkably diverse. They all involve determining the best mix of activities, where the decision variables represent the levels of the respective activities, but these activities arise in a wide variety of contexts. In the context of financial planning (Bestvinová, 2011), the activities might be investing in individual stocks and bonds (portfolio selection), or undertaking capital projects (capital budgeting) (Mrvová, 2013), or drawing on sources for generating working capital (financial-mix strategy). In the context of marketing analysis, the activities might be using individual types of advertising media, or

performing marketing research in segments of the market. In the context of production planning, applications range widely from the product-mix problem (discussed earlier) to the blending problem (determining the best mix of ingredients for various individual final products), and from production scheduling to personnel scheduling. (Saul, 2013)

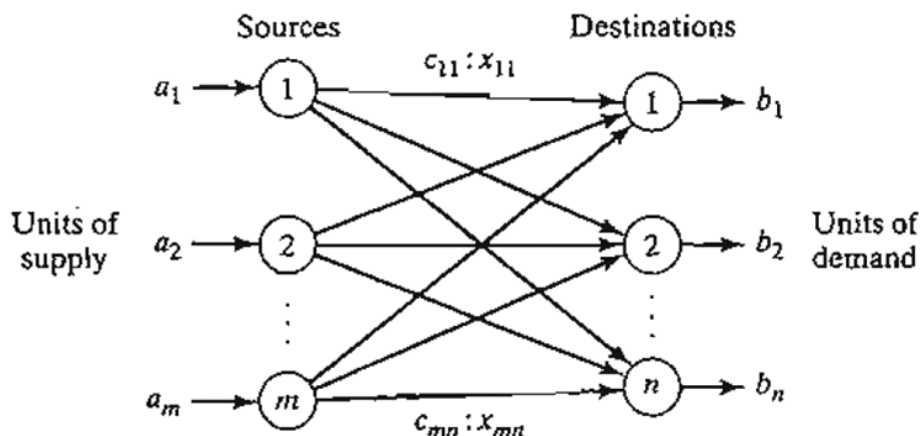
One particularly important special type of linear programming problem is the **transportation problem**. A typical application of the transportation problem is to determine how a corporation should distribute a product from its various factories to various distributors. In particular, given the amount of the product produced at each factory and the amount needed by each distributor, one can determine how much to ship from each factory to each distributor in order to minimize total shipping cost. Other applications extend to areas such as production scheduling. (Saul, 2013)

2.2 Transportation problems

The transportation model is a special class of linear programs that deals with shipping a commodity from sources (e.g., factories) to destinations (e.g., warehouses). The objective is to determine the shipping schedule that minimizes the total shipping cost while satisfying supply and demand limits. The application of the transportation model can be extended to other areas of operation, including inventory control, employment scheduling, and personnel assignment. (Taha, 2007)

Transportation models can also be used when a firm is trying to decide where to locate a new facility. Before opening a new warehouse, factory, or sales office, it is good practice to consider a number of alternative sites. Good financial decisions concerning the facility location also attempt to minimize total transportation and production costs for the entire system (Talnagiová, 2013). The general problem is represented by the network in Figure 1. There are m sources and n destinations, each represented by a node. The arcs represent the routes linking the sources and the destinations. Arc (i, j) joining source i to destination j carries two pieces of information: the transportation cost per unit, c_{ij} , and the amount shipped, x_{ij} . The amount of supply at source i is a_i and the amount of demand at destination j is b_j . The objective of the model is to determine the unknown x_{ij} that will minimize the total transportation cost while satisfying all the supply and demand restrictions. (Taha, 2007)

Figure 1: Representation of the transportation model with nodes and arcs



Source: Taha, 2007

In practice, most often in formulating the distribution problems, we faced with two basic types of tasks (Hrablíková, 2016):

1. The tasks of goods allocating (i.e. transportation problems):

- transportation of homogeneous goods (Straka, 2010),
 - transportation of inhomogeneous goods,
 - the use of various types of transportation vehicles (Korshunov, 2007),
 - generalized etc. ;
2. Associated tasks:
- classic allocation problem (Božek, 2011),
 - optimization problems in ring road,
 - deployment of the task, and others (Straka, 2015).

A linear-programming problem of the following form is called a transportation problem:

$$z = \sum_{i=1}^m \sum_{j=1}^n c_{ij} x_{ij} = \min \quad (4)$$

subject to

$$\sum_{j=1}^n x_{ij} = a_i, \quad i = 1, 2, \dots, m \quad (5)$$

$$\sum_{i=1}^m x_{ij} = b_j, \quad j = 1, 2, \dots, n \quad (6)$$

$$x_{ij} \geq 0 \quad \begin{matrix} i = 1, 2, \dots, m \\ j = 1, 2, \dots, n \end{matrix} \quad (7)$$

while the boundary (5) refer to the balance conditions of the line sums - distribution of the available quantities of goods, boundary (6) the conditions of the column sums balance - import of the required quantity of goods and boundary (7).

The variables x_{ij} represent a shipment of a homogeneous product from origin i to destination j , where the a_i are the amounts of the product to be shipped from the origins i , and the b_j are the amounts demanded by the destinations j . The form presented here assumes

$$\sum_{i=1}^m a_i = \sum_{j=1}^n b_j \quad (8)$$

but the problem can also be formulated with the origin constraints as \geq inequalities and the destination constraints as \leq inequalities, without the restriction that the total supply equal the total demand. It can be shown that if the a_i and b_j are integers, than an optimal basic feasible solution exists that is all integer.

The solution of each transportation task is based on three steps (Hrablik Chovanová, 2016):

1. Finding the acceptable, available and base solution, for example using by some of these methods:
 - method northwest corner (fields), (usually an ineffective method based on the principle of filling the unoccupied northwest field of the table);
 - index method, row-method, column or table minimum (effective methods based on occupation of the fields with the lowest corresponding values of c_{ij});

- Vogel Approximation Method.
2. Testing of the optimality of the reached solution. Principle of solution consists of dual transportation tasks verification by the potentials method (modified method). If the solution is optimal, the calculation stops.
 3. Calculation of the new base solution with a better objective function value "method of potentials" (modified method), which is based on application of dual variables. Principle of solution consists of dual verification of the conditions of transportation tasks.

3. Using Computer Technology in Transportation Tasks Solution

Almost every organization has access to computer programs that are capable of solving enormous LP problems. Although each computer program is slightly different, the approach each takes toward handling LP problems is basically the same. The format of the input data and the level of detail provided in output results may differ from program to program and computer to computer, but once you are experienced in dealing with computerized LP algorithms, you can easily adjust to minor changes. (Render et al. 2012)

The solution of the linear programming real tasks (distribution problems) even if their small size is unthinkable without appropriate software tools (Božek, 2013). The choice of applicable programs is quite broad. Includes simple and inexpensive programs (a few \$, respectively €) which are limited by opportunities to solve problems with no more than just a few variables and restrictive conditions. They are designed generally only for teaching (Božek, 2014). On the market are also the professional high-performance systems that allow solving of the projects containing a lot of variables and many restrictive conditions. However, this also corresponds with their price, which moves often in thousands of USD/€. For the solution of LP smaller tasks, the potential user need not to obtain the specialized programming system. The possibility of processing these types of tasks is available in the table calculator MS Excel, which is usually available for the user on his computer. (Jablonský, 2002)

The most commonly programs used in teaching are QM for Windows and table calculator MS Excel. The most widely used professional optimization systems are LONDO and LINGO.

For solution of easy transportation problem using QM for Windows and table calculator MS Excel, we can define the following example:

Based on the shifting orders and pre-orders from customers of enterprise "XY Trnava" must be in calendar week No. 20 of 2017 divorce the product to the 9 customers in Slovak Republic in the required amount according the orders from customers:

$C_1 - 12,903$ pcs, $C_2 - 7,837$ pcs, $C_3 - 1,525$ pcs, $C_4 - 1,845$ pcs, $C_5 - 2,425$ pcs, $C_6 - 1,500$ pcs, $C_7 - 2,725$ pcs, $C_8 - 1,890$ pcs, $C_9 - 670$ pcs so that the required goods would be at the right place, at the right amount, in the required quality and meet the time limit. A preliminary calculation of transport costs is set up to 1000 €. The challenge is to find out if the company has produced and stored the required amount of stock, to be able to deliver the required amount and suggests the best (optimal) distribution of goods, while logistics information system allows companies to immediately determine the status of the stock.

The company has one main warehouse, along with S_1 production of stock with 5,185 pcs, five locations S_2 of stock with 2,652 pcs, S_3 stock with 8,472 pcs, S_4 stock with 2,543 pcs, S_5 stock with 5,968 pcs, S_6 stock with 8,500 pcs. It has sufficient capacity of the goods in their warehouses because stock levels are calculated according to the provisional schedule for donations and with caution.

Solution of the problem is following:

Table 1 shows the distance in km from individual corporate stores to a customer.

Then we calculate drive cost per 1 km in € for collection of the amount of customers orders. In the conversion are included the total cost of staff, meal unit, amortization, fuel, drive back, provided by *Act of the Slovak Republic* No. 181/2008 Coll. (see Table 2). Cost per 1 km/1 l = 0.986 €, the total cost per 1 km = 1.627 €.

Table 1: Milestone

	O1	O2	O3	O4	O5	O6	O7	O8	O9	a _i
S1	318	83	76	47	410	397	34	167	80	5185
S2	318	83	76	47	410	397	34	167	80	2652
S3	309	109	47	60	400	378	5	133	56	8472
S4	143	175	331	305	167	180	284	225	338	2543
S5	365	163	25	33	456	434	56	189	5	5968
S6	50	285	396	409	51	29	349	216	405	8500
b _j	12903	7837	1525	1845	2425	1500	2725	1890	670	33320

Source: Own processing

Table 2: Cost per 1 km drive in €

	O1	O2	O3	O4	O5	O6	O7	O8	O9
S1	0,040	0,017	0,081	0,041	0,275	0,431	0,020	0,144	0,194
S2	0,040	0,017	0,081	0,041	0,275	0,431	0,020	0,144	0,194
S3	0,039	0,023	0,050	0,053	0,268	0,410	0,003	0,144	0,136
S4	0,018	0,036	0,353	0,269	0,112	0,195	0,170	0,194	0,821
S5	0,046	0,034	0,027	0,029	0,306	0,471	0,033	0,163	0,012
S6	0,006	0,059	0,422	0,361	0,034	0,031	0,208	0,186	0,983
b _j	12903	7837	1525	1845	2425	1500	2725	1890	670

Source: Pappová, 2012

Mathematical notation thus a defined transportation task is as follows: For the **process**, we will consider transporting the product from a warehouse to a particular customer. Since there are six warehouses and nine customers, the total number of processes is 54. **Level of the process** is understood as the quantity of product in selected units shipped from a warehouse to a particular customer. It is useful to mark the levels of the processes by double indexed variables x_{ij} ($i = 1, 2, 3, 4, 5, 6, j = 1, 2, 3, 4, 5, 6, 7, 8, 9$). Wherein x_{ij} is the amount of products transferred from the i^{th} storage to j^{th} customer. Variables can take only non-negative values.

Figure 2: Simulation of discrete random variable

Zošit 2 - Microsoft Excel

Domov Vložiť Rozloženie strany Vzorce Údaje Posúdiť Zobraziť

Vystrihnúť Kopírovať Prilepiť Kopírovať formát Schránka

Arial 12 A⁺ A⁻ B I U Zamovať text Zlúčiť a centrovat

Písmo Zarovnanie Číslo

K15 =SUMPRODUCT(B4:J9;B17:J22)

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2		Zápis dopravného problému "Riešiteľom" s meniacimi sa bunkami										
3		O1	O2	O3	O4	O5	O6	O7	O8	O9		
4	S1	0,040	0,017	0,081	0,041	0,275	0,431	0,020	0,144	0,194	5185	
5	S2	0,040	0,017	0,081	0,041	0,275	0,431	0,020	0,144	0,194	2652	
6	S3	0,039	0,023	0,050	0,053	0,268	0,410	0,003	0,114	0,136	8472	
7	S4	0,018	0,036	0,353	0,269	0,112	0,195	0,170	0,194	0,821	2543	
8	S5	0,046	0,034	0,027	0,029	0,306	0,471	0,033	0,163	0,012	5968	
9	S6	0,006	0,059	0,422	0,361	0,034	0,031	0,208	0,186	0,983	8500	
10		12903	7837	1525	1845	2425	1500	2725	1890	670		
11												
12												
13												
14												
15		a výsledné riešenie										900,87
16		O1	O2	O3	O4	O5	O6	O7	O8	O9		
17	S1	0	5185	0	0	0	0	0	0	0	5185	
18	S2	0	2652	0	0	0	0	0	0	0	2652	
19	S3	3857	0	0	0	0	0	2725	1890	0	8472	
20	S4	2543	0	0	0	0	0	0	0	0	2543	
21	S5	1928	0	1525	1845	0	0	0	0	670	5968	
22	S6	4575	0	0	0	2425	1500	0	0	0	8500	
23		12903	7837	1525	1845	2425	1500	2725	1890	670		
24												

Source: Pappová, 2012

Manual counting of the given example would be difficult and quite time-consuming. Therefore, it is appropriate to use computer technology in this case. Using of MS Excel Solver will individual data input define in a table with the appropriately formulated calculation functions and after the value definition MS Excel Solver will calculates the values of the variables in a few seconds (Figure 2).

Defined solution in MS Excel Solver can modify the requirements of customers, the amount of stock and calculation of the total cost of transport from the Table 3. Following the relevant parameters in transportation problem were changing cells filled in. The target cell was determined by cell \$K\$15, cost function MIN and table in the area \$B\$17:\$K\$23 with the resulting solution and restrictions. By definition of restrictive conditions have been achieved the best (optimal) resulting values that are shown in Figure 5 in the area \$B\$17:\$K\$. Restrictive conditions were defined as follows:

- not to produces a greater quantity of goods than can be sold,
- distribution of such amount of goods, which requires each customer,
- not to exceed the established financial resources, that are available.

Variant calculated in Table 2 is the best one; it meets all the restrictions and does not set out the funds. In the following Table 3 are shown evaluated transportation costs to individual customers.

Table 3: Evaluation of transport costs to individual customers

Customer	O1	O2	O3	O4	O5	O6	O7	O8	O9	Σ
Transportation costs	312,3	133,2	41,17	53,50	82,45	46,5	8,17	215,46	8,04	900,86

Source: Pappová, 2012

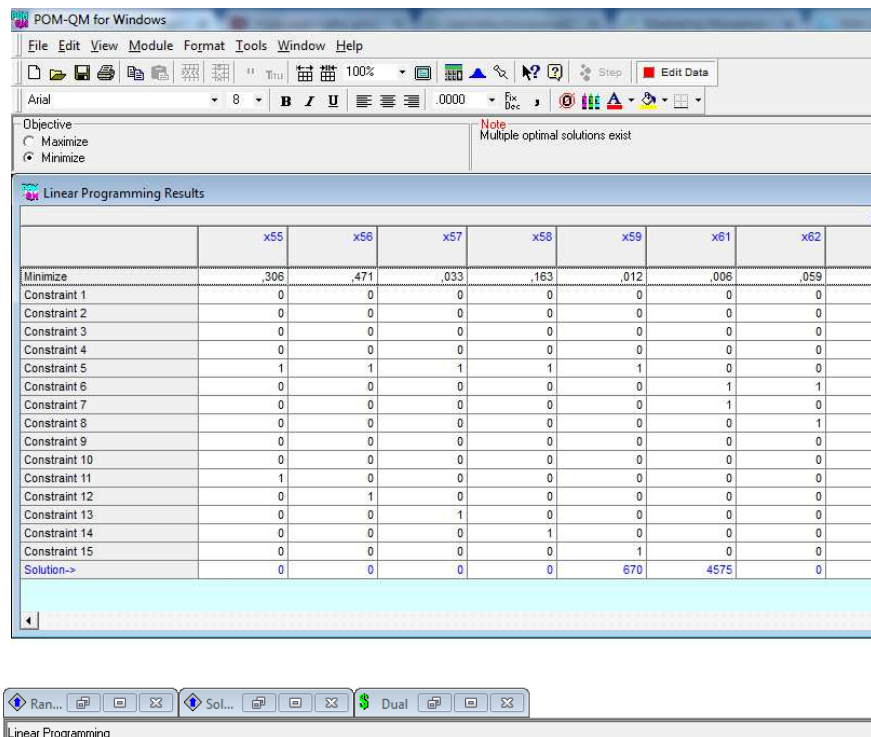
Pre-allocated funds for transportation	1000,000 €
Actually spent funds on transportation	900,869 €
Profit - saving	99,131 €
Loss	0,00 €

Transportation costs from individual stores to individual customers are evaluated in Table 4, actually spent funds are not exceeding budget, meet the time limit and on the basis of MS Excel

This demonstrates how to combine distribution and logistics in the company into the global distribution channel, where individual elements of the system are interconnected. In this transportation problem the delivery of goods to customers would not achieve an optimum solution, unless the transportation would optimally address the main storage and production to every single warehouse and total production, what considerably facilitates the use of MS Excel and its specialized management tools, e.g. MS Excel Solver.

The advantage of solving problems using MS Excel Solver is the option of changing the input data. In the case the value of the target cell MIN would exceeded the value of more than 1,000 € (after defining all changing cells and constraints) our task would be to change the settings in the target cell VALUE for a set amount in 1,000 € and to calculate transportation problem again. If after that there is still no appropriate solution we would have to exceed the established funds, which would mean that the schedule of each individual stock is not correct and we need to review the overall calculation of subscriptions and stock again. Once again the information flow and feedback in the company need to be review.

Another useful software for calculating transportation problems is also the QM for Windows, which is available for free at: <http://en.freownloadmanager.org/Windows-PC/QM-for-Windows.html>. The program offers solutions not just in transport tasks of linear programming, but also in other areas of operational research. The advantage is the clarity and simplicity of entering input data to solve problems.

Figure 3: Table with the solution and bookmarks


The screenshot shows the POM-QM for Windows application. The 'Linear Programming Results' window is open, displaying a table of results. The table has columns for variables x55, x56, x57, x58, x59, x61, and x62. The rows include the objective function (Minimize) and 15 constraints. The solution values are shown at the bottom of the table.

	x55	x56	x57	x58	x59	x61	x62
Minimize	.306	.471	.033	.163	.012	.006	.059
Constraint 1	0	0	0	0	0	0	0
Constraint 2	0	0	0	0	0	0	0
Constraint 3	0	0	0	0	0	0	0
Constraint 4	0	0	0	0	0	0	0
Constraint 5	1	1	1	1	1	0	0
Constraint 6	0	0	0	0	0	1	1
Constraint 7	0	0	0	0	0	1	0
Constraint 8	0	0	0	0	0	0	1
Constraint 9	0	0	0	0	0	0	0
Constraint 10	0	0	0	0	0	0	0
Constraint 11	1	0	0	0	0	0	0
Constraint 12	0	1	0	0	0	0	0
Constraint 13	0	0	1	0	0	0	0
Constraint 14	0	0	0	1	0	0	0
Constraint 15	0	0	0	0	1	0	0
Solution->	0	0	0	0	670	4575	0

Source: QM for Windows

After entering the input data SW will solve the problem and the results will be displayed clearly in tables. A solution of dual problem can be opened from another file as well as problem solving using simplex method and if it was a model with two variables, as well as graphics solution example. (Figure 3)

4. Conclusion

The definition of logistics is widely used in transport, storage, transforming materials into finished products and deliver them to an end users. Typically, logistics is seen as the actions of which the objective is to minimize costs and maximize profits. (Bajdor, 2012)

Logistics process is nowadays one of the most important elements in decision-making structures of various industrial enterprises. Logistics is the area in which many organizations can reach efficiency in their business. Without a well-organized logistics network throughout the transformation process it is impossible to operate efficiently in the market. Well-organized logistics chains are about cost savings. Cost savings mean higher profits and higher profits mean a higher chance of survival in the hyper-competitive environment.

For solving transportation problems relating to the minimization of transport costs, it is possible to use methods of operational analysis (index method, Vogel approximation method, the modified method, the Hungarian method) and for a quick, effective problem solving also use of computer technology with which it is possible to change every single input data, so we always obtain the requested solution to the current problem.

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Comparison of SMEs and their development in the Visegrad Group

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Abstract

The Visegrad Group (V4) is a cultural and political alliance of four Central European states – Czech Republic, Hungary, Poland and Slovak Republic – for the purposes of furthering their European integration, as well as for advancing military, economic and energy cooperation with one another. All four nations in the Visegrad Group are high income countries with a very high Human Development Index. SMEs, which are defined as companies with no more than 250 employees and a maximum turnover of €50 million, are generally seen as the backbone of the European economy, accounting for 99 % of EU businesses and providing around three-quarters of all private sector jobs.

Besides the assessment of specific basic indicators of development of SMEs in the V4 countries will in the article assess the competitiveness of the V4 countries from 2007 to 2015 using The Global Competitiveness Report issued by the World Economic Forum.

Keywords: *basic indicators, comparison, competitiveness, development*

JEL Classification: *L11, L25, L26, M20*

1. Introduction

The Visegrad Group was formed on 15th February 1991 at a meeting of the President of the Czechoslovak Republic, Václav Havel, the President of the Republic of Poland, Lech Wałęsa, and the Prime Minister of the Republic of Hungary, József Antall. The central motif was the desire to intensify mutual cooperation and friendship among the three Central European states. It was especially in the initial period of its existence (1991–1993) when the Visegrad Group played its most important role during talks with NATO and the EU. In the following years, the intensity of cooperation between the V4 countries began to slacken due to the prevalence of the idea that individual efforts towards accession to the Euro-Atlantic integration formations will be more efficient. Visegrad cooperation was resumed in 1998. In the wake of disintegration of Czechoslovak Republic in 1993, the Visegrad Group has since then been comprised of four countries, as both successor countries, the Czech Republic and the Slovak Republic, are members of the Visegrad Group. (<http://www.visegradgroup.eu/>)

About the future of V4 countries wrote for example Boris and Noël in 1996. „The Visegrad countries are enjoying solid economic growth driven by vibrant new private sectors. To make a successful transition to a market economy, however, they will need to push ahead with financial, legal, and regulatory reforms. “

SMEs, which are defined as companies with no more than 250 employees and a maximum turnover of €50 million, are generally seen as the backbone of the European economy, accounting for 99% of EU businesses and providing around three-quarters of all private sector jobs. SMEs form the backbone of the EU28 economy. In 2015, just under 23 million SMEs generated €3.9 trillion in value added and employed 90 million people. They accounted in 2015 for two thirds of EU28 employment and slightly less than three fifths of EU28 value added in the non-financial business sector. The vast majority of SMEs are micro enterprises with less

than 10 employees – such very small firms account for almost 93% of all enterprises in the non-financial business sector. The table I documents significance of SMEs in the EU28 in 2015.

On 1 January 2015, the population of the European Union was estimated at 508.2 million.

Table 1: SMEs and large enterprises: number of enterprises, employment, and value added in the EU28 in 2015

Index	Micro	Small	Medium	SME	Large	Total
Enterprises (number)	21 356252	1 378702	224647	22 959600	44458	23 004059
%	92.80	6.00	1.00	99.80	0.20	100.00
Persons Employed (number)	40057408	27503428	23170352	90731192	45168732	135899904
%	29.50	20.20	17.00	66.80	32.20	100.00
Value Added (EUR Bilion)	1453926	1233270	1250907	3938103	2923873	6861976
%	21.20	18.00	18.20	57.40	42.60	100.00

Source: Eurostat. National Statistical Offices and DIW Econ

Across Member States, the density of the SME population varies greatly across the EU28. Indeed, in 2015, the number of SMEs per hundred inhabitants ranged from 2.2 in Romania to 9.4 in the Czech Republic. (SK 7.5. Hu 5.3. Pl 4.1)

Since 2013, SME employment followed a moderate growth path, growing by 1.1% in 2014 and 1.5% in 2015.

In contrast, SME value added has grown at a comparatively fast pace, posting growth of 3.8% in 2014 and 5.7% in 2015.

The level of SME value added has exceeded the pre-crisis level since 2014. However, despite the modest growth experienced since 2013, the level of SME employment in SMEs in 2015 remained below pre-crisis levels (Annual report EU SMEs, 2015-2016).

In the non-financial business sector, the four most important SME sectors in terms of employment in the

EU28 were ‘business services’, ‘construction’, ‘manufacturing’ and ‘wholesale/retail trade’.

The many of authors solved the development and competitiveness SMEs and quality of business environment in V4 countries. Several years after accession of the Czech Republic, Hungary, Poland and Slovak Republic to the European Union, the institutional setup for starting and running a business in these countries has been greatly improved, also as a result of the obligatory adjustment of the local regulations to the EU standards. Still, using the aggregated World Bank Index of the ‘ease of doing business’ as a measure of institutional maturity (World Bank, 2013), we find all four CEE countries under study in the bottom half of the EU-27 list in 2013 (Cieřlik, 2014). The most popular indicator worldwide for assessing the quality of business environment is the Corruption Perception Index (CPI). The German company Transparency International (TI) has been publishing its findings regarding the index every year since 1995. TI identifies corruption as misuse of the public authority for personal gains such as bribing the officials, paying commissions for winning public tenders or embezzlement of public resources, these are considered as negative factors of economic efficiency (Lambsdorff, 2000).

According to the Annual Report on European SMEs 2015/2016 follows that SMEs had most pressing problems in 2015: FINDING CUSTOMERS 25%. AVAILABILITY OF SKILLED STAFF OR EXPERIENCED MANAGERS 18 %. COMPETITION 14 %. REGULATION 13 %. COST OF PRODUCTION OR LABOUR 13 %. ACCESS TO FINANCE 10 %.

2. Data and Methods

The aim of this paper is to show the role small and medium sized companies in V4 countries, based on secondary sources. And also, to explore the development and the basic problems of micro, small and medium enterprises in V4 countries.

This paper works with the terms micro-, small- and medium-sized enterprise as specified in the Article 1. Commission Regulation (EC) No 800/2008.

The paper includes basic characteristics of V4 countries' economies, especially their macroeconomic environment, analysis of empirical data. Data analysis was performed using the following reports: SBA Fact Sheet for Czech Republic, Slovak Republic, Hungary and Poland (EC, 2016), Annual Report on European SMEs 2015/2016 (EC, 2016), Global Competitiveness Report 2015-2016 (WEF, 2016) and Corruption Perception Index 2016 (TI, 2017). The analysis of the data allowed to formulate final conclusions.

(This paper is my first part of the SMEs investigation in V4 countries.)

3. Results and Discussion

3.1 SMEs in Visegrad Countries

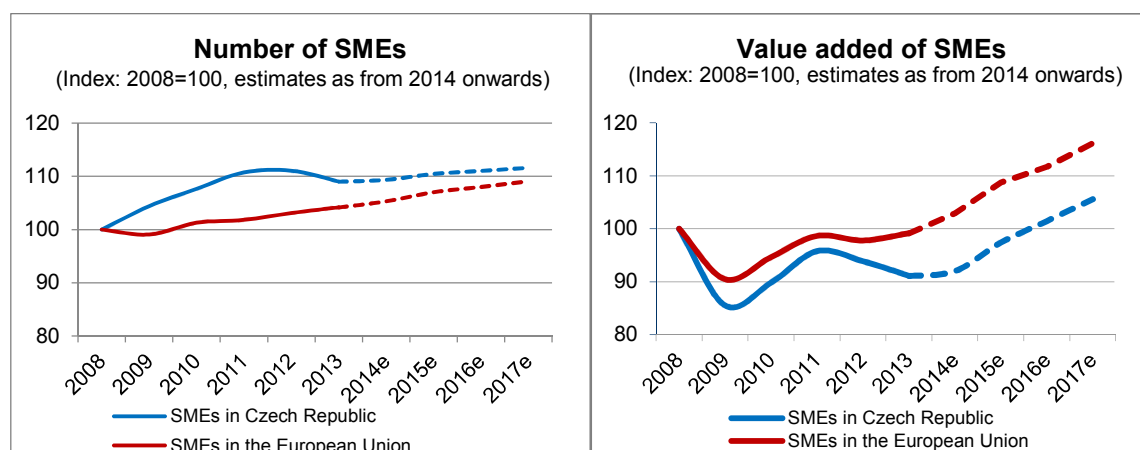
3.1.1 SMEs in the Czech Republic

In the Czech Republic 10 538.8 thousand people were lived in 2015. The share of the number of EU population was 2.1%.

In 2015, the number of SMEs grew by 1% from the previous year, representing approximately 10 000 companies. Czech SMEs started increasing their output while keeping employment roughly stable. Both parameters remained below their pre-crisis levels though. The SME value added in 2015 grew by 6% from the previous year, reaching 97% of its 2008 level. SME employment increased slightly from 97% to 98% of its 2008 level (with 26 000 new jobs in absolute terms). The outlook for the next two years is mixed. SME value added is expected to grow by 4 % p.a., while employment is forecast to remain stable.

SMEs in the 'non-financial business economy' play an equally important role in the Czech Republic as they do in the EU — in both cases they represent 99.8 % of all businesses. Czech SMEs account for 55 % of total value added and 68 % of total employment, both of which are similar to the respective EU averages. Among Czech SMEs, medium-sized firms produce the highest share of value added (21 %), while micro firms account for the largest share of jobs (32%) in 2015.

Figure 1: The development of number and value added of SMEs



Source: SBA Fact Sheets 2016

The development of number and value added of SMEs in the Czech Republic and EU. you can see in the Figure 1.

Table 2: Number of SMEs by sectors in the Czech Republic and EU28 in 2015

Number of SMEs by sectors. 2015				
	Czech Republic		EU 28	
	Number	%	Number	%
Manufacturing	170 790	17.5	2 091 314	9.2
Construction	165 473	16.9	3 333 387	14.6
Trade	246 576	25.3	6 281 719	27.6
Services	393 836	40.3	11 076 516	48.6
Total	976 675	100.0	22 782 936	100.0
Number of persons employed in SMEs by sectors. 2015				
	Czech Republic		EU 28	
	Number	%	Number	%
Manufacturing	701 391	29.7	17 723 470	19.8
Construction	327 218	13.9	10 956 616	12.2
Trade	551 207	23.3	23 125 592	25.8
Services	782 797	33.1	37 678 054	42.2
Total	2 362 613	100.0	89 483 732	100.0
Value added of SMEs by sectors (in mil. Euros). 2015				
	Czech Republic		EU 28	
	Number	%	Number	%
Manufacturing	14 298	31.1	775 979	20.4
Construction	4 798	10.5	434 400	11.4
Trade	10 035	21.9	848 959	22.3

Services	16 775	36.5	1 747 967	45.9
Total	45 906	100.0	3 807 304	100.0

Source: Eurostat.SBS database 2017

As in other V4 countries was in the Czech Republic the most important sector. sector of services in SMEs. But only in the share 40.3 % in 2015. The share of services in EU 28 was 48.6% in the same year. The share on employment was only 33.1% in 2015 (EU 28 - 42.2%). Also. the share on value added was lower than the share EU 28 (about 9.4 %) in sector services. Very important SME sector in the Czech Republic was Manufacturing because it had more share on number of SMEs than EU 28 (about 8.3%). on employment (about 9.9%) and the share on value added was higher about 10.7 % than the share in EU 28.

3.1.2 SMEs in the Slovak Republic

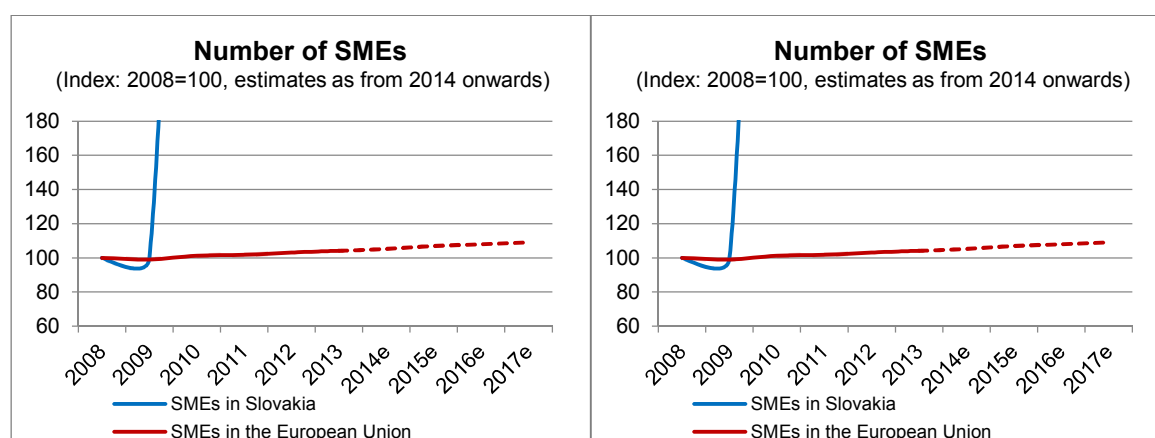
In the Slovak Republic 5 421.3thousand people were lived in 2015. The share of the number of EU population was 1.1%.

The sector of small and medium-sized enterprises evolved in conditions of growing performance of the Slovak economy. in 2015.

Positive developments seen almost all major indicators characterizing the development of SMEs. Compared to 2014. the SME sector has increased employment (0.7%). the added value (4.4%). added gain (+ 8.8%). and the export of goods (5.7%). Compared to the pre-crisis year of 2008. however. SMEs lag especially in the area of job creation.

Micro-firms. however. play a more significant role in Slovak Republic than the EU average. They contribute 27% of value added and 41% of employment. 6 and 12 percentage points respectively higher than the EU average. The most important sectors are wholesale and retail trade and manufacturing. which generate respective shares in SME value added of 25% and 23%. In addition. they each account for more than a quarter of SME employment.

Figure 2: The development of number and value added of SMEs



Source: SBA Fact Sheets 2016

The development of number and value added of SMEs in the Slovak Republic and EU. you can see in the Figure 2.

Table 3: Number of SMEs by sectors in the Slovak Republic and EU 28 in 2015

Number of SMEs by sectors. 2015				
	Slovak Republic		EU 28	
	Number	%	Number	%
Manufacturing	63 739	15.7	2 091 314	9.2
Construction	79 186	19.5	3 333 387	14.6
Trade	111 888	27.6	6 281 719	27.6
Services	151 238	37.2	11 076 516	48.6
Total	406 051	100.0	22 782 936	100.0
Number of persons employed in SMEs by sectors. 2015				
	Slovak Republic		EU 28	
	Number	%	Number	%
Manufacturing	269 868	26.5	17 723 470	19.8
Construction	130 645	12.8	10 956 616	12.2
Trade	266 340	26.2	23 125 592	25.8
Services	351 074	34.5	37 678 054	42.2
Total	1 017 927	100.0	89 483 732	100.0
Value added of SMEs by sectors (in mil. Euros). 2015				
	Slovak Republic		EU 28	
	Number	%	Number	%
Manufacturing	4 304	24.5	775 979	20.4
Construction	1 647	9.4	434 400	11.4
Trade	4 607	26.2	848 959	22.3
Services	7 001	39.9	1 747 967	45.9
Total	17 559	100.0	3 807 304	100.0

Source: Eurostat. SBS database 2017

The SME's sector in the Slovak Republic is dominated by the services. but only in the share 37.2% in 2015. The share of services in EU 28 was 48.6%. The share on employment was 34.5% only in 2015 (EU 28 - 42.2%). Also, the share on value added was lower than the share EU 28 (about 6 %) in sector services. But the sectors Manufacturing and construction had more share on number of SMEs (manufacturing about 6.5 % and construction about 4.9%) on employment (manufacturing about 6.7 % but construction about 0.6 % only). But the share on value added was higher only in manufacturing (about 4.1 %) than the share of EU 28.

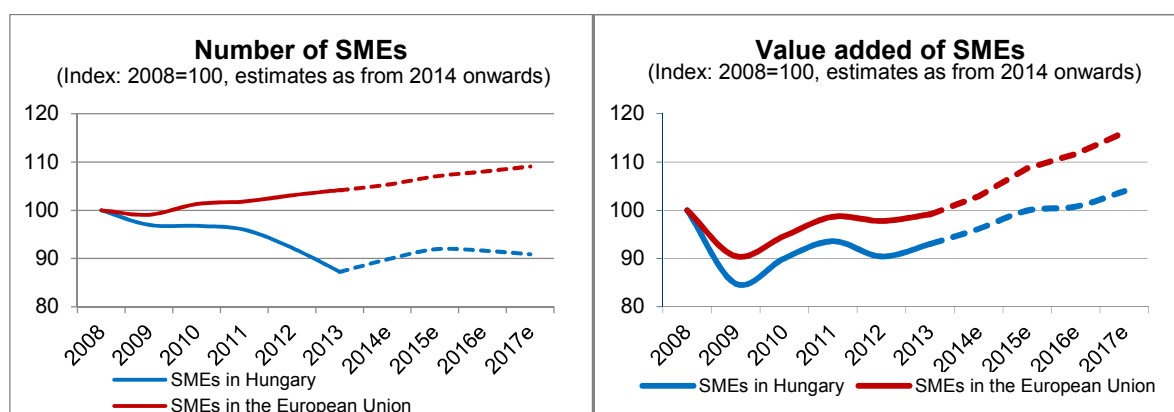
3.1.3 SMEs in the Hungary

In the Hungary 9 849.0thousand people were lived in 2015. The share of the number of EU population was 1.9%.

Hungary's SME sector, especially in terms of employment, plays a key role in the domestic economy than is the case in most other Member States. However, the sector has only partially recovered from the crisis. Although total SME employment stagnated in 2010-2015, SME value

added grew by 11%. As a result, SMEs almost fully returned to their pre-crisis level of value added in 2015. At the same time, SME employment was still 7% below its 2008 level. From 2016 onwards, SMEs are expected to continue their uneven development of recent years. In 2016-2017, SME value added is predicted to rise by 4%, while SME employment is expected to fall by 2%. Following the Recession of 2008 the Hungarian SME sector could not gain strength. The SME sector was hit worse by the recession than large enterprises.

Figure 3: The development of number and value added of SMEs



Source: SBA Fact Sheets 2016

The development of number and value added of SMEs in the Hungary and EU, you can see in the Figure 3.

Table 4: Number of SMEs by sectors in the Hungary and EU 28 in 2015

Number of SMEs by sectors. 2015				
	Hungary		EU 28	
	Number	%	Number	%
Manufacturing	48 359	9.4	2 091 314	9.2
Construction	57 585	11.1	3 333 387	14.6
Trade	137 366	26.6	6 281 719	27.6
Services	273 608	52.9	11 076 516	48.6
Total	516 918	100.0	22 782 936	100.0
Number of persons employed in SMEs by sectors. 2015				
	Hungary		EU 28	
	Number	%	Number	%
Manufacturing	369 546	21.5	17 723 470	19.8
Construction	185 841	10.9	10 956 616	12.2
Trade	462 080	26.9	23 125 592	25.8
Services	699 036	40.7	37 678 054	42.2
Total	1 716 503	100.0	89 483 732	100.0
Value added of SMEs by sectors (in mil. Euros). 2015				
	Hungary		EU 28	

	Number	%	Number	%
Manufacturing	6 383	23.9	775 979	20.4
Construction	2 424	9.1	434 400	11.4
Trade	6 296	23.5	848 959	22.3
Services	11 622	43.5	1 747 967	45.9
Total	26 725	100.0	3 807 304	100.0

Source: Eurostat. SBS database 2017

The SME sector in Hungary is dominated by the services 52.9 % in 2015. The average of EU 28 was 48.6% in services. But the share on employment was 40.7% in 2015 (EU 28 42.2%). Also, the share on value added was lower than the share EU 28 (about 2.4%).

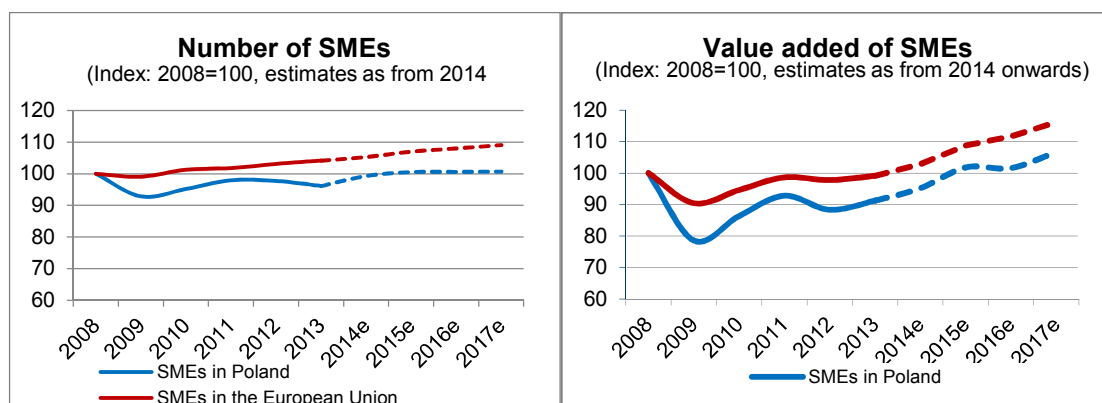
3.1.4 SMEs in the Poland

In the Poland 38 005.6 thousand people were lived in 2015. The share of the number of EU population was 7.5%.

In 2015, value added by Poland's SMEs for the first time exceeded its 2008 level. It is expected to stagnate in 2016 and start growing again at a rate of 5% in 2017. Employment in SMEs remained 2% lower than in 2008 and is expected to remain unchanged until 2017. In 2015, Poland's SMEs produced 52% of value added, around 5 percentage points below the European average, and yet they accounted for 69% of total employment, approximately 2 percentage points above the European average.

Low productivity is an issue for Polish firms in all size classes. SMEs' labour productivity, calculated as the ratio of value added to employment, was less than 40% of the EU average. (EUR 16 920 per person, against an EU average of EUR 43 404). In 2015, micro-firms recorded the largest productivity gap. Their labour productivity amounted to EUR 11 030 per person, which was 70% below the European average of EUR 36 296. This phenomenon is partly explained by the fact that Polish companies tend to be run with relatively little capital. The Polish economy has expanded every year since 2010 with annual growth rates ranging between 1.3% and 5%. SMEs played a role in this development: their value added in the 'non-financial business economy' increased by 3.3 % per year between 2010 and 2015. Employment grew by 0.5% per year in the same period.

Figure 4: The development of number and value added of SMEs



Source: SBA FactSheets2016

The development of number and value added of SMEs in the Poland and EU. you can see in the Figure 4.

Table 5: Number of SMEs by sectors in the Poland and EU 28 in 2015

Number of SMEs by sectors. 2015				
	Poland		EU 28	
	Number	%	Number	%
Manufacturing	183 414	12.0	2 091 314	9.2
Construction	233 752	15.3	3 333 387	14.6
Trade	511 523	33.4	6 281 719	27.6
Services	600 475	39.3	11 076 516	48.6
Total	1 529 164	100.0	22 782 936	100.0
Number of persons employed in SMEs by sectors. 2015				
	Poland		EU 28	
	Number	%	Number	%
Manufacturing	1 460 249	25.6	17 723 470	19.8
Construction	743 920	13.1	10 956 616	12.2
Trade	1 762 200	30.9	23 125 592	25.8
Services	1 735 910	30.4	37 678 054	42.2
Total	5 702 279	100.0	89 483 732	100.0
Value added of SMEs by sectors (in mil. Euros). 2015				
	Poland		EU 28	
	Number	%	Number	%
Manufacturing	27 199	28.6	775 979	20.4
Construction	15 419	16.2	434 400	11.4
Trade	24 545	25.8	848 959	22.3
Services	27 843	29.4	1 747 967	45.9
Total	95 006	100.0	3 807 304	100.0

Source: Eurostat. SBS database 2017

The SME sector in Poland is dominated by the services 39.3 % in 2015. The average of EU 28 was 48.6% in services. The share on employment was 30.4% only in 2015 (EU 28 42.2%). Also, the share on value added was lower than the share EU 28 (about 16.5%). But the trade sector in Poland has more share on number of SMEs about 5.8%. on employment about 5.1% and value added about 3.5% then EU 28 share.

3.1.5 The comparison of SMEs basic indicators in V4 countries

Table 6: Number of SMEs and micro sized enterprises in V4 countries between 2008 and 2017

Czech	2008	2009	2010	2011	2012	2013	2014	2015	2016e	2017e
All SMEs	898 401	937 954	967 174	994 938	997 936	979 522	982 702	992 616	997 786	1003 070
Micro*	44 394	47 274	385 140	395 028	381 049	376 865	384 484	395 223	401 788	407 487
Slovak	2008	2009	2010	2011	2012	2013	2014	2015	2016e	2017e
All SMEs	61 931	61 779	402 140	411 064	394 638	389 708	397 148	407 791	414 048	419 451
Micro*	44 394	47 274	385 140	395 028	381 049	376 865	384 484	395 223	401 788	407 487
Hungary	2008	2009	2010	2011	2012	2013	2014	2015	2016e	2017e
All SMEs	565 197	548 073	546 939	542 468	521 178	493 151	507 654	519 648	518 108	513 755
Micro	533 712	519 427	518 355	514 478	493 186	465 161	478 453	489 767	488 565	484 715
Poland	2008	2009	2010	2011	2012	2013	2014	2015	2016e	2017e
All SMEs	1531059	1421561	1457207	1499812	1496288	1471966	1521179	1539794	1540858	1542 466
Micro	1464089	1358017	1392002	1431525	1426044	1400229	1448182	1466188	1467509	1469 363

Source: Eurostat. SBS database 2017

Table 6 documents the development of number SMEs in V4 countries. Because in all V4 countries are dominated micro sized enterprises. the table documents their development too.

Table 7: The comparison of SMEs basic indicators in V4 countries (2015)

Class size	Number of enterprises			Number of pers. employed			Value added		
	Czech Republic		EU28	Czech Republic		EU28	Czech Republic		EU28
	Number	(%)	(%)	Number	(%)	(%)	Billion €	(%)	(%)
Micro	955 046	96.1	92.8	1 123 258	31.7	29.5	17.9	20.1	21.2
Small	31 140	3.1	6.0	625 065	17.6	20.2	12.7	14.3	18.0
Medi.	6 430	0.6	1.0	668 338	18.9	17.0	18.2	20.5	18.2
SMEs	992 616	99.8	99.8	2 416 661	68.2	66.8	48.8	54.9	57.4
Large	1 492	0.2	0.2	1 127 464	31.8	33.2	40.1	45.1	42.6
Total	994 108	100.0	100.0	3 544 125	100.0	100.0	88.9	100.0	100.0
Class size	Number of enterprises			Number of pers. employed			Value added		
	Slovak Republic		EU28	Slovak Republic		EU28	Slovak Republic		EU28
	Number	(%)	(%)	Number	(%)	(%)	Billion €	(%)	(%)
Micro	395 223	96.8	92.8	597 090	41.1	29.5	8.8	27.0	21.2
Small	10 429	2.6	6.0	208 513	14.3	20.2	4.4	13.5	18.0
Medi.	2 139	0.5	1.0	230 807	15.9	17.0	5.5	16.8	18.2
SMEs	407 791	99.9	99.8	1 036 410	71.3	66.8	18.6	57.3	57.4
Large	487	0.1	0.2	417 090	28.7	33.2	13.8	42.7	42.6
Total	408 278	100.0	100.0	1 453 500	100.0	100.0	32.4	100.0	100.0

Class size	Number of enterprises			Number of pers. employed			Value added		
	Hungary		EU28	Hungary		EU28	Hungary		EU28
	Number	(%)	(%)	Number	(%)	(%)	Billion €	(%)	(%)
Micro	489 767	94.1	92.8	861 275	34.4	29.5	9.6	18.1	21.2
Small	25 750	4.9	6.0	479 997	19.2	20.2	8.6	16.3	18.0
Medi.	4 131	0.8	1.0	404 644	16.2	17.0	9.5	18.0	18.2
SMEs	519 648	99.8	99.8	1 745 916	69.7	66.8	27.7	52.5	57.4
Large	877	0.2	0.2	757 678	30.3	33.2	25.1	47.5	42.6
Total	520 525	100.0	100.0	2 503 594	100.0	100.0	52.9	100.0	100.0
Class size	Number of enterprises			Number of pers. employed			Value added		
	Poland		EU28	Poland		EU28	Poland		EU28
	Number	(%)	(%)	Number	(%)	(%)	Billion €	(%)	(%)
Micro	1466188	95.0	92.8	3 074 929	36.3	29.5	33.9	17.9	21.2
Small	58 900	3.8	6.0	1 226 673	14.5	20.2	26.8	14.2	18.0
Medi.	14 706	1.0	1.0	1 543 302	18.2	17.0	38.2	20.2	18.2
SMEs	1539794	99.8	99.8	5 844 904	68.9	66.8	98.9	52.3	57.4
Large	3 048	0.2	0.2	2 635 363	31.3	33.2	90.1	47.7	42.6
Total	1542842	100.0	100.0	8 480 267	100.0	100.0	189.0	100.0	100.0

Source: Eurostat. SBS database 2017

In the light of the above characteristics it is possible to point at some key differences between SME sectors in V4 countries (Table 7).

The Slovak and Czech SME sector is dominated by micro sized enterprises. In 2015. the share of micro sized enterprises was 96.2% in the Slovak Republic and 96.1% in the Czech Republic. The average of EU28 was 92.8%. Hungary had the highest (from V 4) share of small sized enterprises (4.9%). The share of EU28 was 6%. And Poland had the highest share of medium sized enterprises (6 %). The same share as EU28.

In all V4 countries the share of number of persons employed was higher than share in EU 28. in 2015. The Slovak Republic had the highest share on the number of persons employed in SMEs in 2015 (71.3%). While Slovak micro enterprises employed 41.1% of all employees.

The Slovak SME sector was dominated with the share of value added between the V4 countries in 2015. The share of value added in Slovak Republic was similar (57.3%) as average EU 28 (57.4%)

It is interesting that in 2015 within the V4 countries. the highest proportion of women in the total number of entrepreneurs was recorded in Hungary 33.4%. In Poland. the proportion of women amounted to 33.0%. In the Czech Republic 30.6% and in Slovak Republic 29.8%. (SBA Fact Sheets – Slovak Republic.2016)

3.2 Visegrad countries competitiveness rank

The Global Competitiveness Report issued by the World Economic Forum is analysing national economies. That Report defines competitiveness as a set of institutions. policies and factors that determine the level of productivity of a country. The level of productivity sets the sustainable

level of prosperity that can be earned by the economy. The Global Competitiveness Report ranks competitiveness of nations in relation to 12 pillars of economic competitiveness: institutions. infrastructure. macroeconomic stability. health and primary education. higher education and training. goods market efficiency. labour market efficiency. financial market efficiency. technological readiness. market size. business sophistication and innovation. Switzerland tops the GCI (Global Competitiveness Index) for the seventh consecutive year. In 2015. its value was 5.76. (Statistics in 2015 Min 2.84; Max 5.76; Median 3.91)

Table 8: Visegrad countries competitiveness rank

Year (number of countries)	Czech Republic		Slovak Republic		Hungary		Poland	
	rank	score	rank	score	rank	score	rank	score
2007 (131)	33	4.62	41	4.34	47	4.44	51	4.28
2008 (134)	33	4.62	46	4.40	62	4.22	53	4.28
2009 (133)	31	4.67	47	4.31	58	4.22	46	4.33
2010 (139)	36	4.57	60	4.30	52	4.30	39	4.51
2011 (142)	38	4.51	69	4.25	48	4.33	41	4.51
2012 (144)	39	4.51	71	4.14	60	4.30	41	4.46
2013 (148)	46	4.43	78	4.10	63	4.25	42	4.46
2014 (144)	37	4.53	75	4.15	60	4.28	43	4.48
2015 (140)	31	4.70	67	4.26	63	4.24	41	4.50
2016 (138)	31	4.70	65	4.28	69	4.20	36	4.56

Source: World Economic Forum 2017

The Czech Republic has most competitive economy from V4 countries (see Table 8).

3.3 Corruption Perception Index in V4 countries

The 2016 Corruption Perceptions Index by Transparency International measures the perceived levels of public sector corruption in 176 countries/territories around the world and can also be used to assess the quality of the business environment.

Table 9: Corruption Perception Index in V4 countries in 2016-2010

Country (Rank 2016)	2016 (176)	2015 (168)	2014 (168)	2013 (177)	2012 (176)	2011 (176)	2010 (177)
Czech R. (47)	55	56	51	48	49	44	46
Slovak Republic (54)	51	51	50	47	46	40	43
Hungary (57)	48	51	54	55	55	46	47
Poland (29)	62	62	61	60	58	55	53

Source: Transparency International – Corruption Perception Index 2017

Note: (The number in the bracket indicates how many countries were involved in the survey that particular year. or country rank in 2016)

Table 9 shows development of Corruption Perception Index in V4 countries in 2016-2010.

The scale of 0 (highly corrupt) to 100 (very clean). The global average score is a paltry 43. indicating endemic corruption in a country's public sector. All countries V4 had better score

than average of 176 countries. But EU 28 average score is 65. This score did not achieve any from V4 countries.

Among the V4 countries had the worst results Hungary score 48 and best Poland 62. In 2016. the Czech Republic lost in comparison with 2015 result only point. but in the final analysis fell 10 rungs. The table clearly shows that in the Slovak Republic and Poland is improving perceptions of corruption.

4. Conclusion

One of the most burdensome restrictions of the SME sector are administrative burdens, which in comparison with the situation of large enterprises are disproportionately high for SMEs.

Excessive bureaucracy and high costs of conducting business activity are a common challenge for SMEs in all of V4 countries.

The Czech economy is coming out of a period of recession with an export-led recovery. It continues to have a strong manufacturing sector compared to other EU Member States. However, there are key challenges, including reducing administrative burdens on business, facilitating more user-friendly tax compliance, providing a less bureaucratic public administration in which to operate, improving infrastructure, improving links between industry and universities to ensure commercialisation of R&D, improving energy efficiency and matching the skills of the workforce with the needs of businesses.

SMEs are particularly sensitive to the quality of the business environment. Therefore the paper shows Visegrad countries competitiveness rank and Corruption Perceptions Index.

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Business Model Agility: A Solution for Business Model Innovation

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Abstract

Inactively responding to the environmental changes is not what the today's businesses are looking for. They look for taking advantage of these changes and turn such threats to opportunities to have a competitive advantage. In this regard, this study conducted to present a conceptual model for designing an agile business model which is flexible and fast enough to be adjusted with the environment changes. To reach this goal, the wide literature of business model, business model innovation, and agility were reviewed. Findings have revealed that the concept of agility can help organizational decision makers to react properly to the environment changes. And finally, this study proposes a conceptual model to design agile business model. This model recommends four steps to enable the businesses to have an agile business model. The first step is identifying business model innovation drivers. The second step is determining the agility level of the company. The next step is gap analysis between the agility needs and the agility level of the company. And finally, the fourth step is strategy formulation.

Keyword: Business model, business model innovation, agility, agile business model

JEL Classification: L26, M11, M15

1. Introduction

In one hand, the new technologies and innovations force companies to change their older valuecreation and value delivering process (Mitchell, & Bruckner Coles, 2004). On the other hand, Grabowska (2015) expresses that technological changes, applying innovations to shorten the production process, globalization processes, and increasing role of information, intangible resources and intellectual capital in reaching the organizational goals are the principal factors forcing the companies to innovate their business model. Hence, business model innovation has been always counted as one of the most optimized respond to both reacting the environment changes and reviewing the business models to take advantages of the new opportunities (Mitchell, & Bruckner Coles, 2004; Chesbrough, 2007; Giesen, Berman, Bell, & Blitz, 2007). Because, it is proved that business model innovation is more effective and more efficient rather than changing in one part of the organization so as to be adjusted with the changes and take advantage of the new opportunities (Casadesus-Masanell, & Ricart, 2010; Heikkila, Heikkila, & Bouwman, 2015).

Accordingly if the goal of adjusting with the changes is to take advantage of the changes and see them as opportunities, the speed of response is a determinant factor to make a competitive advantage. Hence, when the organizational decision makers decide to respond the changes by business model innovation, having an agile business model which is enough flexible and fast to be adjusted as fast as possible provides a sustainable advantage to the company (Heikkila, Heikkila, & Bouwman, 2015).

Therefore, this study is conducted to provide a conceptual model helping companies to have an agile business model- a model which is flexible enough and able to be innovated as fast as possible. To do so, a wide literature of business model, business model innovation, and agility is studied and finally the proposed model of the study is recommended based on the literature.

In terms of purpose, the current study is an applied research and in terms of methodology it is a qualitative research and in terms of data collection, it is a descriptive research. To reach the objective of the research, the wide literature of business model, innovation, business model innovation, agility, and business model agility is precisely studied.

2. Agility

2.1 Definitions of Agility

Despite of the existence of an elaborated literature related to agility, there is not a consensus among the authors about the agility definition. The term of agile is defined as “quick in movement, capable to think quickly and mentally sharp or aware” (Miyachi, 2011; Ovesen, Tollestru, & Eriksen, 2011). Accordingly, this concept is using in the business and management literature as the ability of the organization to adjust and respond accurately and on time to the environment changes (Sherehiy, Karwowski, & Layer, 2007; Reed & Blunsdon, 1998; Gunasekaran, 1999).

Iacocca Institute defines agility as a manufacturing system which is able to meet the marketplace needs which are rapidly changing (Yusuf, Sarhadi, & Gunasekaran, 1999). According to the Kidd (1994) agility is quickly and proactively adapt the enterprise elements to expected and unexpected and changes. On the other hand, Yusuf, Sarhadi, & Gunasekaran (1999) argue that agility is to apply successfully the fundamental of competitiveness (e.g. quality, innovation, flexibility, and speed) to present customer-driven products in dynamic environments.

Of course, the aim of agility is not just inactively responding to the environment changes, it is also considered as taking advantages of changes (Sharifi and Zhang, 1999; Dove, 1994; Kidd, 1994). This concepts implies adaptability and flexibility. In other words, an organization is called agile which is flexible enough to adjust internal structure and processes according to the external changes.

2.2. Agility Models

Sharifi et al. (2001) introduce a model for agile manufacturing. In this model, they presented a four dimensions model of agile manufacturing in which agility drivers, agility capabilities, agility providers, and finally strategic abilities are the main pillars. Sharifi et al. (2001) argue that responsiveness (the ability to recognizing and respond quickly to the changes), competency (such as productivity, efficiency, and effectiveness), flexibility (the ability to produce the vary products with the same equipment), quickness (the ability to perform the operations in shortest possible time) are the main attributes of the agility capabilities which are directly determined by agility providers whilst the agility providers are organization, technology, people, and innovation.

On the other hand, Tsourveloudis and Valavanis (2002) provide a model allows managers to evaluate how agile they are. According to this model, production infrastructure (which includes setup or change over time, versatility (variety of operations machine/workstation can perform), adjustability of machine, substitutability (ability to reschedule jobs), operation commonality, variety of loads of material handling system, transfer speed, part variety, hangover effort, and part commonality), market infrastructure (which contains re-configurability of the product mix, modularity index (ease of adding new components), expansion ability, and the range of volume), people infrastructure (which comprises training level and job rotation), and finally, information infrastructure (which includes interoperability (level of standardization) and networking) should be evaluated (Tsourveloudis and Valavanis, 2002).

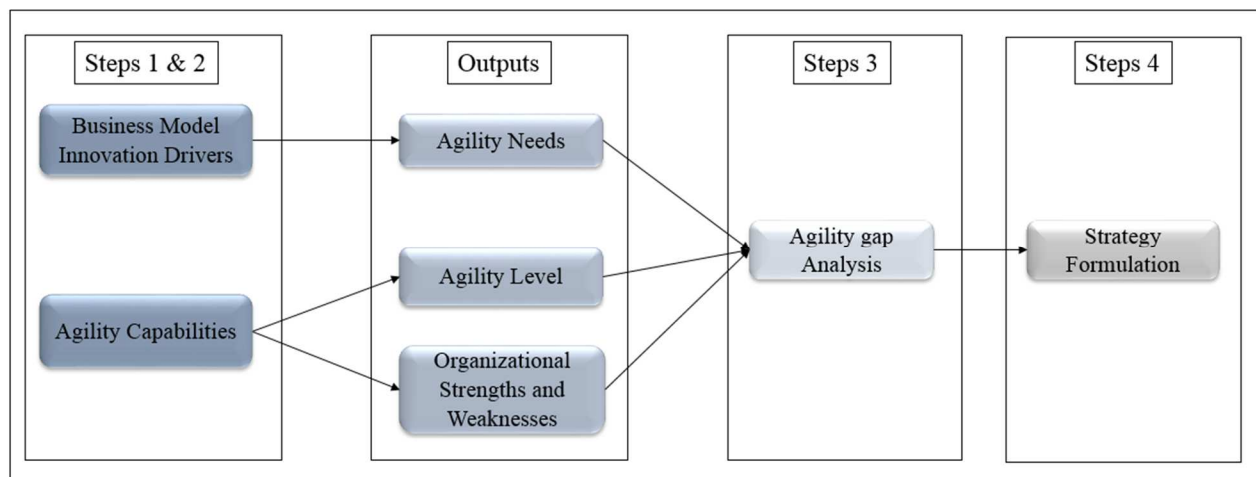
Shih and Lin (2002) introduce and index as agility index which help the analysts to evaluate the agility position of the organizations. They explain that to determine this index organizational management agility (including information management agility, inter-organization cooperation, and institutional framework agility), product design agility (comprising availability of customer demands information, speed of products design, and product design flexibility), and product manufacturing agility (involving re-configurability, manufacturing speed, and flexibility of manufacturing process) should be appraised.

3. Agile Business Model

As it is mention above, the main objective of this study is to providing a conceptual model which offers to the organizational decision makers to have an agile business model. Among the reviewed models, the agility model proposed by Sharifi et al. (2001) is the most holistic that is why, the current study is inspired by this model to propose a framework for the business model agility. Based on this model, the first step is to analyze how agile a business should be and how agile it is. Because it reveals the gap between the agility level is required and the agility level the business is in. Then, the attempts are directed to answer how the business can fill this agility gap.

As it is shown in Figure 1, the proposed model of this study includes 4 main steps. Since and according to the agility definition, agility is the ability of the organization to adjust and respond accurately and on time to the environment changes (Sherehiy, Karwowski, & Layer, 2007; Reed & Blunsdon, 1998; Gunasekaran, 1999). Therefore, identifying the environment changes force the businesses to innovate their business model is the first step should be take and this step is named *business model innovation drivers*.

Figure 1: The proposed model of the study: a conceptual framework to agile a business model



Source: Authors' own model

Sharifi et al. (2001) consider marketplace, competition, customer requirements, technology, social factors, suppliers, internal complexity as the main and important environment drivers which force the business to be changed. The output of this step exposes the required level of agility the business should have (the agility needs). In other words, after this step it will be clarified that how agile the business should be to be able taking advantage of the environment changes.

In the second step the business agility capabilities should be recognized. Sharifi et al. (2001) believe that agility capabilities are quickness, flexibility, competency, and responsiveness which are determined by agility providers (organization, technology, people, and innovation). Output of this step make clears that how agile is the business. Hence, a gap analysis between the agility needs and the agility level of the business (step 3) helps the decision maker to formulate their strategies based on the outputs of the third step and their strengths and weaknesses (step 4).

4. Conclusion

Innovation in business model is more recommended by the research to responding to the environments changes (Mitchell, & Bruckner Coles, 2004; Chesbrough, 2007; Giesen, Berman, Bell, & Blitz, 2007; Mosleh & Nosratabadi, 2015). The goal of business model innovation is not just inactively respond to changes, but also business model innovation sees the changes as opportunities and making benefit from the appeared opportunities (Chesbrough, 2010; Mosleh, Nosratabadi, & Bahrami, 2015). The speed of innovating a business model is always matter (Heikkila, Heikkila, & Bouwman, 2015). Hence, this study is conducted to provide a conceptual model to design a business model which is flexible and fast enough to be adjusted with the changes. To reach this goal, the current study utilized from agility concept.

Today's consistently changing business environment has required the businesses to have new features enabling them to survive and also win the competition. Having an agile business model, firstly, empowers the businesses to able to track the trends and changes in the critical areas which are vital for the business and secondly, helps them to adjust and to respond to the changes on time so that taking advantage of the environmental changes. In other words, having an agile business model gifts a competitive advantage to the organizations. Since it is an adaptive approach, the level of being agile depends on the level of need of the organization.

Thus, the current research has tried to present a theoretical framework to help organizations to firstly, screen the trends and environments changes, then gives guidance to the organizational decision makers to find how they are agile and how they need to be agile. And finally, the presented model suggests that a gap analysis to facilitate them to formulate their business strategies to innovate their business models and reacting to the changes.

This recommended model can be the basic conceptual model of the future studies to do the empirical research. It is recommended that not only the academic researchers, but also the organizations to use the presented model to formulate their strategies regarding to innovate their business model. Because this model is able to answer to two main question in this regard:

1. Why is it required to innovate the business model?
2. How can they have a flexible business model which is able to be innovated as fast as possible?

The proposed model of this study comprise four steps. The first step is recognizing business model innovation drivers which force the businesses to be changed. The output of this step clarifies how much agility is needed.

The second step is identifying the business agility capabilities. The output of this step make clears that how agile is the company.

The next, third step is a gap analysis between the agility needs and the agility level of the company, and finally, as the fourth step, the outputs of the third step and their strengths and weaknesses help companies to formulate the strategies.

Testing the proposed model of this study based on the real data is recommended for the future studies.

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Challenges and factors affecting the performance of rural entrepreneurs in India

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Abstract

The aim of this study is to analyse the challenges and opportunities in rural India that entrepreneurs might face in the current situation. Nearly 73 % of the total Indian population live in rural areas where agriculture and agriculture associated activities are the main sources of their living. The economic growth of the country mainly depends on the progress of rural areas and the standard of peoples living in this area. A rural entrepreneur is one of the great vital contributors in the economic development of a country.

On the contrary, many rural entrepreneurs are facing various problems and challenges due to non-availability of essential amenities in the rural part of developing country like India. Such as lack of education, shortage of finance and raw material, insufficient technical and conceptual capacity it is too difficult for the rural entrepreneurs to start industries in the rural areas. The paper implemented a descriptive research design using 115 randomly selected registered entrepreneurs from Maharashtra state. Data collected were analysed using descriptive statistics the data analysis indicated that lack of finance, insufficient infrastructures, lack of managerial skills were major challenges for rural entrepreneurs. researchers think the government should make provision for entrepreneurs for the establishment of business by proving finance through funding agencies, public/private sector partnership in the infrastructural provision, capacity building and provision of tax incentives for entrepreneurs.

Keywords: rural, entrepreneurship, challenges, problems, Maharashtra, India.

JEL Classification: M1, R0, O1.

1. Introduction

Enterprises are generally considered as the engine of economic development and equitable expansion in emerging economies. They are laborconcentrated, capital saving and capable to help creating job opportunities. Enterprises not only contribute in creating employment but also inspire low skilled level workforce to initiate as entrepreneur level in rural areas. As figures given by Economic Times in June 2013, small medium size enterprises provide jobs near about 40% of India's workforce.

Rural entrepreneurship is currently a key opportunity for the people who migrate from rural areas to Urban areas for employment. India is one of the most populated country in the world where around 73% of peoples living in rural area. But in current situation the percentage of peoples migrating towards urban area increase significantly which is not suitable economy of the country. Several economic, political, social and ecological difficulties in rural areas in developing countries such as India face various challenges for getting employment and results into in peoples migrate towards urban areas to earn their bread and butter as well as migration also affects declining agricultural production and increasing food scarcity.

The rural population founds a major segment in India. The livelihood majorly depends primarily on agriculture and related activities. Growth in this agricultural sector has shown a declining trend during the last one decade. Entrepreneurs play a vital role in the expansion of the economy. There were many problems face by entrepreneurs in their daily activities to run their enterprise. Rural entrepreneurs also face numerous problems from the state and council police

since they do not have licenses or work from “illegal” spaces (Chigunta, Jammie, David, & Veronica, 2005). Capital constrictions also delay the development of rural entrepreneurship (Minniti&Le'vesque, 2008). Those entrepreneurs who were not much financially well-off may be not able to start a business due to financial limitations. Availability of adequate amount of finance to start business is one of the most important factor to those peoples who willing to create their own businesses in rural areas (Robinson, Dassie, & Christy, 2004; Sarasvathy, 2004; Ulrich, 2006). Peoples those who living in rural area they have lack personal savings, and guarantee securities for debt financing, experience and skills. As well as they face strict credit scoring methodologies and regulations, complicated documentation procedures and long waiting periods when they apply for funding (Robinson, Dassie, & Christy, 2004).

Most of the rural entrepreneurs are facing numerous problems because of availability of basic amenities in rural areas such as, non-availability of education, financial and marketing problems, Management and human resource problems, inadequate technical and conceptual capacity etc. Which depress rural entrepreneurs to start businesses in the rural areas. The current research attempt highlight the main problems face by rural entrepreneurs. Particularly emphasis on technological complications (services for repairs of machinery, lack of technical knowledge, scarcity for availability of technology in time, outdated technology, , non-availability of training to entrepreneurs and improved technology). Institutional problems (no Govt. support and incentives, lengthy and complex procedures to advantage institutional help, poor cooperation and coordination between different development agencies such as DICs, SISIs, non-availability of trained peoples inadequate training institutes which provide a smaller amount of attention to objectives, communication gap between field Officials and entrepreneurs), financial problems (availability of sufficient required capital, procurement of loans from different agencies, problem in recovering receivables, challenge of collaterals, extreme transaction cost) and lack of other basic amenities, i.e. availability of electricity, water supply, transport facilities and energy requirements etc.

1.1. Research Objectives

The research objectives are as follows:

1. To examine whether poor financing create a major challenge in the performance of enterprises in Indian rural areas.
2. To determine inadequate social infrastructures constitute a major challenge in the performance of entrepreneurship.
3. To find out whether lack of managerial skills creates a major challenge in the performance of Indian rural enterprises.

1.2. Research Hypotheses

With reference to above research questions, the following null hypotheses were formulated:

1. H₀: Poor financing create a major challenge in the performance of enterprises in Indian rural areas.
2. H₀: Inadequate social infrastructures constitute a major challenge in the performance of entrepreneurship.
3. H₀: Lack of managerial skills creates a major challenge in the performance of Indian rural enterprises.

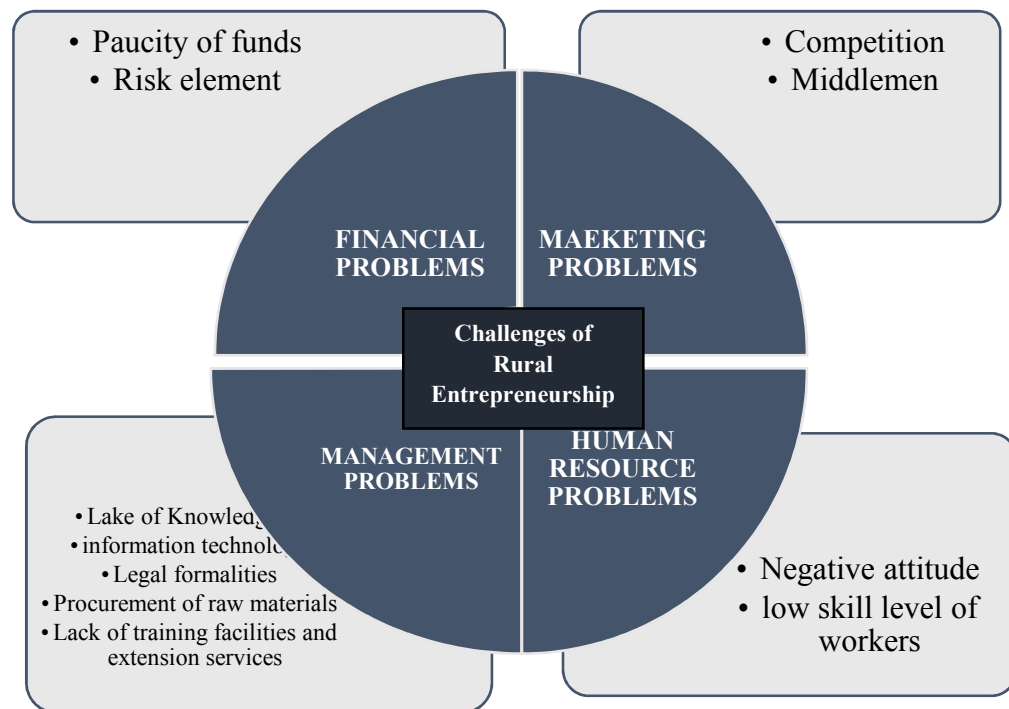
1.3. Review of literature

Rural entrepreneurship is term which indicates entrepreneurship which emerging in rural areas. There is a rising need for rural entrepreneurs for industrial sector commenced by

rural entrepreneurs are giving many employment opportunities to peoples. Institutions and peoples who promoting rural development now see entrepreneurship as a strategic development interference that could fasten the rural development process (Saxena, 2012). Due to lack of confidence level and decisiveness also affect rural entrepreneurship (Hookoomsing & Essco, 2003). In addition to not strong determination, lack of management and technical skills and risk taking capacity also affect rural entrepreneurship. Rural areas also gone through various problems such as dominance by a single business or industry (Lyons, 2000). The rural areas where population is small and isolated population they do not generate the number of daily face-to-face interactions that foster innovation and entrepreneurship. (Robinson, Dassie, & Christy, 2004) claim that the geographic location of enterprises in rural areas is a weakness to entrepreneurs. Looking picture of rural areas communication infrastructure is generally not so strong with few telephone lines and few computers. To get Internet access in such kind of areas is quite difficult and costly. The lack of infrastructure facilities and amenities in sidelining of rural communities. Rural people usually with lack the skills and knowledge in that case on to use internet which affects rural people's access to important information and opportunities. It is very true fact that Entrepreneurs are unable to access information when they need it. The lack of market information (on commodity prices, suppliers) cause to loss of income and mistreatment of rural entrepreneurs by middlemen (Haftendorn & Salzano, 2003).

The other important factor that hampers rural entrepreneurship is bureaucracy. There are a lot of formal law and procedures due to because of that it is difficult to get by business license very easily. This generally delays and affects the effective exploitation of opportunities. Entrepreneurs are frequently exposed to bureaucracy and corruption (Haftendorn & Salzano, 2003). More so, rural people lack of knowledge, they were not aware and understand about start up financing possibilities. They lack successful micro-lending or finance and seed funding. In rural areas, the situation is exacerbated by the fact that the potential entrepreneurs lack collateral to access financial assistance from banks. Deprived or lack of networking also affects rural entrepreneurship (Ozgen & Minsky, 2007). These result rural entrepreneurs to be isolated from feasible relationships in urban areas. In many rural areas which are rich in social capital, there is need to link with other entrepreneurs other than those in rural areas. Rural networking may lead to direct support in terms of raising funds, inter-trading, cooperative efforts, leadership and entrepreneurship development.

Entrepreneurs plays a very important role in the economic development of country. They face numerous problems and challenges in day to day activities. As the thorns are part of roses, similarly every flourishing business has its own kind of problems. Some of the major problems faced by rural entrepreneurs are as under.



I. Financial Problems:

- a) **Paucity of funds:** Maximum numbers of the rural entrepreneurs usually fail to get external funds because of absence of tangible security and credit in the market. The process for getting loan facility is too time-consuming. Availability of finance to rural entrepreneurs is one of the biggest problem which rural entrepreneur is bearing now days especially due to global recession.
- b) **Lack of infrastructural facilities:** The development of rural entrepreneurs is not very strong despite efforts made by government due to lack of proper and adequate infrastructural facilities.
- c) **Risk element:** Rural entrepreneurs have very less risk taking capacity because of lack of availability of financial resources and external support.

II. Marketing Problems:

- a) **Competition:** Rural entrepreneurs face major competition from large sized businesses and urban entrepreneurs. They acquire high cost of production due to high input cost. Competition from large scale industries also creates problem for the survival of new ventures. New business have limited financial resources and therefore they cannot afford to spend more on sales promotion.

III. Middlemen:

Middlemen exploit rural entrepreneurs. The rural entrepreneurs are so much dependent on middlemen for marketing of their products who pocket large amount of profit.

IV. Management Problems:

- a) **Lack of Knowledge of information technology:** Information technology is not so common in rural areas. Entrepreneurs depend on internal relations that boost the flow of goods, services, information and ideas. The concentration of family and personal relationships in rural societies can former helpful but they can face obstacles to effective business relationships.
- b) **Legal formalities:** There are a lot of formal law and procedures due to because of that it is difficult to get by business license very easily.

- c) **Procurement of raw materials:** Procurement of raw materials is really a difficult task for rural entrepreneur. They may transpire with poor quality raw materials, may also face the problem of storage and warehousing
- d) **Lack of technical knowledge:** Rural entrepreneurs suffer a major problem of lack of technical knowledge. Lack of training facilities and extension services create a problem for the growth of rural entrepreneurship.

V. Human Resources Problems:

- a) **Low skill level of workers:** Maximum number of the entrepreneurs from rural areas not able to get labors with high skills. Turnover rates are also high in this case. They have to give them on the job training and their training is generally a serious problem for entrepreneur as they are mostly uneducated and they have to be taught in local language which they understand easily. The industries in rural areas are not only established just to take advantage of cheap labour but also to bring about an integrated rural development. So rural entrepreneurs should not look at rural area as their market, they should also see the challenges existing in urban areas and be prepared for them.
- b) **Negative attitude:** The environment in the family, society and support system is not conducive to encourage rural people to take up entrepreneurship as a career. It may be due to lack of awareness and knowledge of entrepreneurial opportunities. The young and well educated mostly tend to leave. As per circumstances, rural people by force may be more self-sufficient than their urban counterparts, but the culture of entrepreneurship tends to be weak. Continuous motivation is needed in case of rural employee which is sometime difficult for an entrepreneur to impart with.

2. Data and Methods

2.1 Research Methodology

This research employed small medium entrepreneurship activities for development of rural areas of India, The researchers choose Maharashtra state as research area. The study is empirical and explanatory basically based on primary data collected survey. sample survey size was 115 participants from small and medium size enterprises registered with these District Industries Centre were selected on Simple Random sampling basis from Maharashtra state. Researcher use questionnaire and personnel interview as data collection tool and the data analyzed using non-parametric simple percentages while the z-test statistical technique was used in confirming stated hypotheses.

Table 1: Distribution of Sample Entrepreneurs

Sr.no	Districts/DICs	Block/ Taluka	No. of small units (Registered)	Sample entrepreneurs
1	Chandrapur	Warora	2451	20
2	Gondia	Tiroda	2250	25
3	Akola	Khamgaon	1220	10
4	Wardha	Pulgaon	1526	18
5	Jalgaon	Asoda	1020	8
6	Bhandara	Lakhani	1630	34
	Total		10097	115

Source: Annual Reports of the District Industries Centers, 2012

According to the Report of MSME, Government of India (2012), there were 10097 small units registered with the DICs Chanadrapur, Gondia, Akola. Wardha, Jalgaon and Bhandara. these entrepreneurs running their business at Wroara, Tiroda, Khamgaon, Pulgaon, Asod and Lakhani taluka/ blocks. The reason behind for choosing entrepreneurs from block wise for survey because these blocks are the centers of various business activities

3. Result and Discussion

3.1 Demographic findings

Table 2: Demographic Findings (N=115)

Sr no.	Characteristics	Frequency	Percentage
1	GENDER		
	Male	103	89.56
	Female	12	10.44
2	AGE		
	20-35	89	77.39
	36-45	14	12.17
	46-55	9	7.83
	56 and above	3	2.61
3	HIGHEST LEVEL OF EDUCATION		
	Secondary	18	15.65
	Diploma	32	27.83
	Bachelor degree	53	46.09
	Master degree	12	10.43
4	MARITAL STATUS		
	Single	42	36.52
	Married	73	63.48
5	BUISNESS INDUSTRY		
	Agriculture/Agro industry	55	47.83
	Manufacturing	30	26.08
	Service	20	17.39
	Handcraft	10	8.70

Source: calculation based on Field survey

From table 2 shows that majority of the respondents i.e. 103 (89.56%) are males while females constitute only 12 respondents (10.44%). The implication of this result is that majority of those who engaged in entrepreneurial activities are males it shows woman dominating Indian culture, looking towards age structure the age of the majority 89 respondents (77.39%) of those entrepreneurs ranging from 20 to below 35 years, followed by age range 36-45 that is 14 respondents (12.17%), age group ranging 46-55 years recorded 9 respondents (7.83%) and the least being age range 56 and above found only 3 respondents (2%). The result implies that most

of the respondents are in their active and productive age. According to education level variable Majority i.e. 53 respondents (46.09%) of the entrepreneurs are bachelor holder, 32 respondents (27.83%) holds National Diploma while 18 respondents (15.65%) hold Secondary School Certificates and only 12 respondents (10.43%) hold master degree. The implication is that majority of the entrepreneurs are graduates.as per findings it shows that 42 respondents (36.52%) are single and 73 respondents (63.47%) are married. If we will discuss about where rural entrepreneurs were more active then result implies that majority of 55 respondents (47.82%) are from agriculture sector while 30 respondents (26.08%) from manufacturing sector, 20 respondents (17.39%) from service sector and 10 respondents (8.70%) from handcraft sector.

3.2 Distribution of Responses on Research Questions

Table 3: Distribution of Responses on Research Questions

Sr.no	Challenges and problems for rural entrepreneurs	Distribution of Responses on Research Questions							Total score %
		Height		Medium		Low		Total Score	
		Respondent	percentage	Respondent	percentage	Respondent	percentage		
1	Poor financing	66	57	31	27	18	16	115	100
2	Inadequate social infrastructure	71	62	30	26	14	12	115	100
3	lack of managerial skills	61	53	32	28	22	19	115	100
4	Lack of Knowledge of information technology	58	51	30	26	27	23	115	100
5	Procurement of raw materials	77	67	29	25	9	8	115	100
6	Legal formalities	68	59	34	30	13	11	115	100
7	Competitors and middleman in marketing	61	53	37	32	17	15	115	100
8	Multiple taxation constitutes	70	61	24	21	21	18	115	100
9	Less risk bearing capacity	67	58	23	20	25	22	115	100
10	Adverse social, cultural and industrial environment	55	48	39	34	21	18	115	100

Source: calculation based on Field survey

From the responses received from rural entrepreneurs above results were evaluated on a scale of height, medium and low response. The first challenge poor financing showed that out of 115 respondents 66 gave a heightened response, 31 a medium response and 18 a low response. Similarly, for the other challenge inadequate social infrastructure 71 gave an above medium response, 30 a medium and 14 a low response respectively. For lack of managerial skills, a higher response on the upper side 61 was obtained; a medium response of 32 and low response of 22. For the lack of knowledge of information, a highly acclaimed heightened response with 58 compared to 30 and 27 was obtained for medium and low respectively.

In case of procurement of raw materials, 77 people gave a heightened response, 29 gave medium and 9 gave a low response. For legal formalities, a satisfactory evaluation was made, 68 people gave a heightened response, 34 medium and 13 gave a low response. Competitors and middlemen in marketing gave an above average response with more responses on the heightened side (61), with 37 medium and 17 low.

Multiple taxation constitutes had a highly appreciative evaluation of 70 height, 24 medium and 21 low. In case of less risk bearing capacity, a balanced response was obtained with nearly 50 people on upper side and 50 on lower side. There were 67 with height response, 23 medium and 25 low. Adverse social, cultural and industrial environment more response on the upper side 55, 39 medium and 21 low.

4. Hypothesis testing

1) Test of the First Hypothesis

H₀: Poor financing does not constitute a major challenge in the performance of enterprises in Indian rural areas.

H₁: Poor financing constitutes a major challenge in the performance of enterprises in Indian rural areas.

As shown in appendix 1 the calculated $Z = 3.17$ is greater than the critical $Z = 1.96$. Therefore, the null hypothesis is rejected whereas the alternate hypothesis is accepted. This results that poor financing constitutes a major challenge in the performance of enterprises in Indian rural areas.

2) Test of the Second Hypothesis

H₀: Inadequate social infrastructures do not constitute a major challenge in the performance of entrepreneurship.

H₁: Inadequate social infrastructures constitute a major challenge in the performance of entrepreneurship.

As shown in appendix 2 the calculated $Z = 5.031$ is greater than the critical $Z = 1.96$. thus, first hypothesis reject the null hypothesis and accept the alternative hypothesis. This proves that inadequate social infrastructures constitute a major challenge in the performance of entrepreneurship.

3) Test of the Third Hypothesis

H₀: Lack of managerial skills does not constitute a major challenge in the performance of Indian rural enterprises

H₁: Lack of managerial skills constitutes a major challenge in the performance of Indian rural enterprises

As shown in appendix 3 the calculated $Z = 2.388$ is greater than the critical $Z = 1.96$. We thereby reject the null hypothesis while the alternative is accepted. This shows that lack of managerial skills constitutes a major challenge in the performance of Indian rural enterprises

5. Conclusion and Recommendations

The paper discussed challenges and factors affecting the performance of rural entrepreneurs in India. It undertakes that government intervention over the provision of financial assistance, social infrastructures and promising government policies will go a long in addressing the major problems and challenges of rural entrepreneurs

The four major findings of the research are as follows:

- Poor financing creates a major challenge in the performance of enterprises in Indian rural areas.
- Inadequate social infrastructures constitute a major challenge in the performance of entrepreneurship.
- Lack of managerial skills creates a major challenge in the performance of Indian rural enterprises

Arising from the findings of this paper, it is recommended that Indian government should take the following steps to address the major challenges of rural entrepreneurs of India.

- Provision of soft loans for new startups.
- Government guaranteeing of long-term loans to entrepreneurs
- Establishment of entrepreneurship funding agency
- Public/Private sector partnership in infrastructural provision
- Provision of tax incentives for SMEs operators
- Should arrange special training programmes for rural entrepreneurship.
- Rural entrepreneur should more competitive and efficient in the local & international market.
- We should invite successful rural entrepreneurs from other states of country.

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Appendix

Appendix 1

Computation of calculated Z for the first hypothesis

From table 1, we have

$$P = 66, \quad 57.39\% = 0.5739, \quad P_o = 0.5, \quad N = 115$$

$$Z = \frac{0.5739 - 0.5}{0.5(1-0.5)}$$

$$\begin{aligned}
 & \frac{\frac{0.0739}{\sqrt{115}}}{\frac{0.25}{10.7238}} \\
 = & \frac{0.0739 * 10.7238}{0.25} \\
 = & 3.17 \\
 \mathbf{Z = 3.17}
 \end{aligned}$$

Appendix 2

Computation of calculated Z for the second hypothesis

From table 2, we have

$$P = 71, \quad 61.73\% = 0.6173, \quad P_0 = 0.5, \quad N = 115$$

$$\begin{aligned}
 Z &= \frac{0.6173 - 0.5}{\frac{0.5(1-0.5)}{\sqrt{115}}} \\
 &= \frac{0.1173}{\frac{0.25}{10.7238}} \\
 &= 0.1173 * \frac{10.7238}{0.25} \\
 &= 5.0316 \\
 \mathbf{Z = 5.316}
 \end{aligned}$$

Appendix 3

Computation of calculated Z for the third hypothesis

$$P = 61, \quad 53.04\% = 0.5304, \quad P_0 = 0.5, \quad N = 115$$

$$\begin{aligned}
 Z &= \frac{0.5304 - 0.5}{\frac{0.5(1-0.5)}{\sqrt{115}}} \\
 &= \frac{0.1034}{\frac{0.25}{10.7238}} \\
 &= 0.1034 * \frac{10.7238}{0.25} \\
 &= 2.388 \\
 \mathbf{Z = 2.388}
 \end{aligned}$$

The Main Barriers to the Development of SMEs

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Abstract

Enterprises are directly affected by the business environment. In connection with the fact that SMEs represent the majority of all businesses it is necessary to analyse the main barriers to their development. The theoretical background provides different aspects to study the barriers of small and medium enterprises. The main objective of primary research was to explore the significant correlation between the barriers to business sector and the nature of the economic sector in which the business operates. The questionnaire survey to verify the research question was conducted on a sample of 496 small and medium-sized enterprises in self-government region Nitra in Slovak Republic, because it is within a reasonable distance from the biggest cities in Slovak Republic (Bratislava, Košice). Basic and specific methods of research were used for data processing. To verify the research question a one-way analysis of variance (ANOVA) was used. Based on the analysis of collected primary data, recommendations for the future development of enterprises are formulated.

Keywords: barriers, development, Nitra Region, SMEs

JEL Classification: M29, R11, R59

1. Introduction

The small and medium enterprises are catalysts of any developed economy. The benefits these enterprises represent can be mentioned their ability to adapt quickly to changing market conditions, which can be implemented due to simple organizational structure and the resulting personal relationship with employees, as well as with customers. Among the socio-economic benefits of small and medium-sized enterprises is classified their ability to generate workplaces. The aim of this paper is to identify the main barriers of the development of SMEs. Based on theoretical background we defined research question. The data collection was realised with questionnaire survey in self-government region Nitra in Slovak Republic.

1.1 Literature Review

Theoretical definition of the research problem will be addressed first to the definition of small and medium enterprises. Further the theoretical background of disadvantages and barriers to SMEs will be identified.

It is generally known that the benefits of SMEs are reflected in the region, as entrepreneurs invest their own capital to make profit, which significantly contributes to the recovery of the region and shapes its business environment. The business environment in the definition of Strážovská, Strážovská and Pavlík (2007) is the environment surrounding the enterprise and influencing the business activity, which is closely related to the competitive environment, i.e. governing institutions, infrastructure, other businesses etc. (Strážovská, Strážovská, & Pavlík, 2007) Performance of businesses is affected by various social and economic factors. Based on the regional aspects of the business environment it can be assumed, that the development of the region depends on the characteristics of the business environment, hence placing more and more emphasis on the improvement. A well-developed business environment is essential for the

development of Slovak Republic and its regions, as well as contributes to the growth of the market economy. (Mura, Machová & Tóth, 2015)

As the local and national level of mutual relation of the enterprise and its environment is strongly influenced by the state, (e.g. economic policy, economic and social aspects, etc.) Klvačová (2008) summarizes the functions of the state shaping the business environment as the following: (Klvačová, 2008)

- regulating and stabilizing function – to create stable conditions for implementation of business activities and in long term ensure the existence and enforcement of the law;
- redistribution function – mitigate the social consequences of unsustainable processes depending on functioning of the market and market mechanisms;
- allocation function – linked to the need for the state to correct market failures on supply side and distribution of public goods.

Considering these facts, the role of the state is to support and create conditions for entrepreneurship. The interaction of regions and SMEs requires an existence of institutions supporting regional development. These institutions have to help SMEs in various situations.

Barriers to development in small and medium-sized enterprises can be categorized on the basis of different aspects. In terms of time we can distinguish long and short-term barriers to business development. As a long-term barrier, the lack of infrastructure and the inappropriate fund contribution can be mentioned. A typical short-term barrier example is the conversion of the euro to other currencies. Considering the roots of the barriers to business development objective (e.g. financial crisis) and subjective (e.g. poorly defined sales strategy of the business) barriers can be distinguished. (Belas, Bartoš, Ključnikov & Kozubíková, 2015)

According to E. Šubertová barriers affecting SMEs can be divided into external and internal factors. External factors, as legislation are barriers from outside the company. Internal factors are connected with the nature of the business and form the internal environment of the company. The most common internal barrier is the relationship between the owner and the company management. (Šubertová & Kinčáková, 2014)

Despite the considerable benefit of SMEs, we can also recognize some barriers they face. The barriers SMEs face with can be classified as the follow: (Majdúchová & Neumannová, 2010)

- a) negative social perception of entrepreneurs – entrepreneurs blame the media which puts very little emphasis on promoting examples of successful entrepreneurship;
- b) less access to capital – SMEs find it difficult to obtain a loan to finance their long-term strategic investment plans;
- c) entrepreneurship training – SMEs are convinced that the education system does not place an appropriate emphasis on entrepreneurship;
- d) limited innovative capacities and low spending on research and development – despite the fact that SMEs provide high number of innovations, these are of lower category;
- e) administrative burden – bureaucracy is reported to be a major obstacle by SMEs.

In addition to these factors hindering SMEs in their development, authors listed the non-functional legislation and judiciary. They argues that the growing number of SMEs in the 90s of the 20th century also increased the legislative requirements. Thus a large number of new rules and regulations were created to ensure the functioning of the market economy, but its enforcement and compliance has no sufficient standards, lawsuits are ineffective. (Mura & Sleziak, 2015)

Barriers to the development of SMEs Sobeková-Majková (2011) divided into two groups, whether the disadvantages result from the nature of the enterprise or specific business conditions in the Slovak Republic. A substantial part of the disadvantages arising from the nature of SMEs form a limited access to financial sources resp. business loans, which is caused by high-risk nature of SMEs and the limited ability of liability. Among problems arising from specific conditions of entrepreneurship in Slovak Republic, the author ranks high contribution burden of SMEs, the often changing and non-transparent legislation and the non-functioning capital market. (Sobeková-Majková, 2011)

Barriers may affect businesses to extend, that may cause the disappearance of enterprise. Failure of the business can also be caused by insufficient analysis of the market, poor quality products, inefficient handling of funds, underestimation of the competition, even the lack of managerial skills. (Korcsmáros& Majdúchová, 2016; Belas, Sipko & Bilan, 2015)

2. Data and Methods

Based on the study of literature it is possible to identify a number of barriers that prevent the company to develop. It can be concluded, that various economic sectors have different character, i.e. the same potential barriers affect the enterprises of particular economic sector in different measure. The aim of the research question is to highlight the most serious barriers in various economic sectors in order to easily identify the possible solutions to mitigate the barriers of the business sector. To achieve a favourable future development of the company it is important to identify the barriers and the extent to which the company is influenced by it.

The main objective of the primary research is the verification of the formulated research question i.e. Can significant correlation be demonstrated between the severity of barriers to business sector and the nature of the economic sector in which the business operates?Based on research question the H_0 hypothesis and H_1 hypothesis as an opposite to H_0 was formulated. The questionnaire survey to verify the research question was conducted on a sample of 496 SMEs in Nitra region. The questionnaire research was conducted in March-May 2015. Submitted questionnaires had been properly coded before answers were filled into a chart with coded questions. Processing the data obtained were used basic, as well as specific research methods. To verify the research question a one-way analysis of variance (ANOVA) was used, the level of significance (α) was 5.

3. Results and Discussion

To recognize a correlation we must examine the relationship between the interval and nominal variables (factors) for each of the pre-defined factors, barriers to the development of the business environment in Slovak Republic. The questionnaire contains the following factors affecting the development of the business environment of SMEs:

- a) Limited access to finance, resp. credit sources;
- b) Non-transparent, complicated public procurement;
- c) High contribution burden;
- d) High tax burden;
- e) Non-transparent and constantly changing legislation;
- f) Poor law enforcement and slow judiciary;
- g) High administrative demand, bureaucracy;
- h) High level of corruption.

While examining the view of entrepreneurs on the business environment in Slovak Republic, H_0 hypothesis and H_1 hypothesis as an opposite to H_0 was formulated to research question. Hypothesis is analysed using one-way ANOVA (see Table 1).

In case of factors, such as limited access to finance, resp. credit sources; non-transparent and complicated public procurement and high contributions, the P-value is less than the specified significance level, i.e. $\text{sig.} > 0,05$, which means, that for these factors null hypothesis is confirmed, so the difference measured in our sample is random. There is no correlation between the variables. For other factors (high tax burden, non-transparent and constantly changing legislation, poor law enforcement and slow judiciary, high administrative burden, bureaucracy, high level of corruption) is rejected and the alternative hypothesis is confirmed, i.e. there are statistically significant differences between enterprises in different economic sectors in terms of severity of barriers, non-transparent and constantly changing legislation, poor law enforcement and slow judiciary, high administrative burden and high level of corruption, which we have identified as factors necessary to improve the business environment. Different economic sectors had different opinion about the impact these factors have on the business environment.

Table 1: One-way ANOVA analysis

Indicator		Sum of squares	Level of freedom	Average of squares	F-value	Sig. (p-value)
Limited access to finance, resp.credit sources	Between groups	6,152	7	0,879	1,796	0,086
	In the group	216,717	443	0,489		
	Together	222,869	450			
Non-transparent and complicated public procurement	Between groups	5,879	7	0,840	1,425	0,193
	In the group	261,168	443	0,590		
	Together	267,047	450			
High contribution burden	Between groups	1,991	7	0,284	0,846	0,549
	In the group	148,909	443	0,336		
	Together	150,900	450			
High tax burden	Between groups	4,766	7	0,681	2,064	0,046
	In the group	146,103	443	0,330		
	Together	150,869	450			
Non-transparent and constantly changing legislation	Between groups	6,787	7	0,970	2,620	0,012
	In the group	163,962	443	0,370		
	Together	170,749	450			
Poor law enforcement and slow judiciary	Between groups	6,861	7	0,980	2,124	0,040
	In the group	204,429	443	0,461		
	Together	211,290	450			
High administrative burden and bureaucracy	Between groups	7,261	7	1,037	2,219	0,032
	In the group	207,142	443	0,468		
	Together	214,404	450			
High level of corruption	Between groups	10,015	7	1,431	2,587	0,013
	In the group	244,974	443	0,553		
	Together	254,989	450			

Source: Based on the results of own research

In case of the first three factors H_0 hypothesis was confirmed, while it was rejected in case of five factors, where the alternative hypothesis was confirmed. Considering the research question, whether there is a significant relation between the severity of barriers of the business sector and the nature of the economic sector in which it operates, it can be said that there is partial relation between the variables, because five factors from eight show statistically significant relation.

While examining the various factors, e.g. the potential barriers to development of SMEs in Slovak Republic, we examined the importance of required changes in different fields to contribute to the improvement of the business environment. We have distinguished three main areas (taxes and contributions, financial sources; labour law; law enforcement and corruption), we extended and defined.

In the field of taxes, contributions and financial sources we examined the necessity of changes in the field of legislation, taxes and contributions, accessibility of bank resources and the availability of financial resources from the EU. Almost 80% of respondents consider it very important to make changes in the field of taxation and contributions, since the high tax and contribution burden proved to be serious barriers to development of SMEs. Entrepreneurs have long been expressing their objection towards high tax and contribution burden of SMEs. As it was published on the internet portal of SME, the state attracts businesses to the regions with high unemployment rate by offering tax relief, providing tax holidays to entrepreneurs willing to start business in the regions of high unemployment rate. Thus measures are applied short-term and require entrepreneurs to invest at least 100 000 EUR in districts with over 20% unemployment rate. It is not clear yet how much it will cost the state and which entrepreneurs will benefit. (Trebulová, 2015)

4. Conclusion

In reference to the formulated research question, we examined the severity of barriers to development of SMEs. Despite the fact that enterprises of Nitra region involved in the research represent different economic sectors and various factors influence them with different intensity, we can summarize our results as follow. Applying one-way analysis of variance, defined barriers to development of SMEs are the following: high tax burden, non-transparent and constantly changing legislation, poor law enforcement and slow judiciary, but also the administrative burden of businesses, bureaucracy and high level of corruption. In these cases (barriers) would be particularly important to make certain changes. In order to make administrative processes more effective, we propose to build resp. expand possibilities to decrease the bureaucratic burden of SMEs by establishing contact with regional support institutions to use their programmes and services. Centres for Labour and post offices would provide possibility for entrepreneurs to help with basic tasks concerning the tax authorities, social insurance, information about the most advantageous support programmes, which would help implementation of their plans. Comprehensive review, reorganization of the tax liability and legislative burden is also vital. Formulating measures taking into consideration the findings based on primary research we can conclude, that mentioned findings about the main barriers to the development of SMEs can significantly contribute to quality improvement of the business environment in Nitra region. The results of our research will probably useful for formulating the future regional development plan.

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The influence of globalization on ERP systems and their contribution to company accounting department

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Abstract

Constantly growing international integration in economics acquires the global proportions and affects several areas. The securing of competitiveness and sustainable development of companies requires the solutions for new questions, new attitudes, new tools, new thinking and new information in quite complicated conditions. The pressure on managers is increasing as regards the quantity, actuality and verity of information which are indispensable for a decision making. The biggest increase in managers' requirements for a complex providing of information is recently focused on the accounting area. In order to secure the long-term prosperity it is crucial to follow the huge amount of aspects in management what necessitate applying of information systems. Modern business information systems have affected trade, financial and production processes of companies in all sectors. Application of qualitative company information system is getting an important tool for achievement of stabile position in domestic and global markets. The focus of the presented article is laid on the ERP systems and their contribution to company accounting department.

Keywords: information, accounting, management information systems, accounting department.

JEL Classification: Q14, M21, M40, M41

1. Introduction

The significant impact on managers' decision making processes derives from the causalities arising from the global economic conditions, market powers effecting within the frames of basic laws of economy and risks (Serenčes, et al., 2010).

Most of the enterprises see opportunities especially in the internationalization, globalization and regionalization, in pursuance of this, they are gradually smouldering innovative activities and trying to work on their competitive advantages (Ubrežiová, Kapsdorferová, & Sedliaková, 2012).

Globalization and creation of international concerns with a diverse structure of owners require the elaborated system of collecting, processing and providing of relevant information needed for the assessment of economic situation of subjects and receiving of adequate decisions with the aim to achieve the pre-determined tasks (Pakšiová, & Janhuba, 2012).

In order to manage a company in a high quality it is not sufficient for a manager to have a plenitude of information but as well as it is crucially important to have several performance tools at disposal. The increase in market dynamics and production cycles exacts the existence of quality information systems while the quality of company information system can be classified within strategic factors of prosperity and competitiveness of each company (Kokles, & Romanová, 2000).

Soukupová, B., Šlosárová, A., & Baštincová, A. (2004) determine that the company information system presents the records' scheme of economic transactions running in companies from which the information is created and is indispensable for the process of company management.

Quality of the information system significantly influences the competitiveness of a company. Information and data saved in the information system have become one of the most important company assets, especially when used in connection with relevant experience and knowledge (Šilerová, Hennyeyová, & Jarolímek, 2016).

Information systems have been developed for several years. Current companies can select from the wide range of opportunities how to secure the processing of company information. The information system of ERP category (Enterprise Resource Planning) is defined as an efficient tool which is able to cover the planning and management of basic internal company processes (sources and their transformation to outputs), namely on all levels, from operating till strategic one. ERP systems cover the basic internal processes in a company (production, purchase, sale, production logistics, human resources, and economics). The economic process includes: financial accounting, cost management and its control, cash flow management, planning and budgeting (Sodomka, & Klčová, 2010).

The efficient ERP system should help employees at their work and provide relevant data for a daily decision making. It should adapt to company processes of users and be open as regards a possible integration with other systems (Tvrđíková, 2008).

2. Data and Methods

ERP systems are SW tools used to manage company data. ERP systems help companies to deal with the supply chain, receiving, inventory management, customer order management, production planning, shipping, accounting, human resources management, and other business functions.

The article aim is to determine the basic requirements for ERP company systems and financial accounting which is the condition for securing its function as an information source and a tool for the management of economic company development. The article materials present the results of survey performed by authors focused on the issue of information systems, financial accounting and company controlling, knowledge acquired by the study of professional and scientific literature. Inductive-deductive, analytical-synthetic logical scientific method was used at the information acquisition, individual understanding as well as explaining of a given issue.

3. Results and Discussion

We are increasingly confronted with the opinions that we are living in a period of global information society development. It is a society in which the quality of life, economic development as well as future social changes are increasingly dependent on information, from their quality, availability or degree of use.

The information society is connected with a new kind of requirements on the knowledge level and information technology skills (Országhová, Hornyák Gregáňová & Tóthová).

The basic condition for a successful business is the access to information. Reliable information base improves the company performance and competitiveness in the market. It enables managers to make quality and timely decisions and contribute to the company growth. Information is becoming a crucial source of social life development in a global scope what is simultaneously represented in the requirements for the quality of manager's work. The formation of Information Company is accelerating by opportunities for new information and communication technologies enabling the quick creation and transfer of information, scientific knowledge to technological and social processes.

The base of a current society should be the ability to work with a wide range of data, to comprehend them, to derive relevant conclusions and furthermore to decide on their base. These are assumptions of a successful manager's work and in this activity information systems are helping them, supported by information and communication technologies which significantly influence the manner of work with data and information as well as the manners of decision making and communication.

The current modern information system provides sufficient amount of relevant information for relevant decision-making processes is able to immediately provide a complete managerial overview in real time, focused on business growth, effectively changing processes in the company, depending on the needs and desires of consumers and increases employee productivity (Kajanová, 2014).

The level of the usage of information and communication technologies (ICT) has a direct impact on the development and competitiveness of individuals, firms and production sectors (Hallová, et al., 2017).

Company information system manages to organize data so that they are available in case they are needed to those people who really require them and in such a form they really need them. It is not formed only by information technologies and systems. Its parts are also people, equipment, protocols, and methods of collection, analysis, assessment and distribution of information influencing the managers' decisions.

The quality of enterprise information system belongs to the strategic factors of prosperity and competitiveness. Slovak enterprises significance of information and information system appreciate only gradually. It should be emphasized that no information system will solve its internal problems, nor weaknesses in management, or automatically will not increase its competitiveness. Managers must learn to work with information, not just to acquire, but also to share them, processing and evaluating them in a way to bring the company the corresponding effect. The information and information system of the company are built to provide the suitable supporting system for decision-making processes of the company management. The role of the information system is to produce the inevitable information for the efficient management of the organization and for the association of its managing and managed system.

The information system of ERP category is an efficient tool which is able to cover planning and management of crucial internal company processes (sources and their transformation to outputs), namely on all management levels, from operating to strategic one. It presents the core of application part of information systems and covers several functions and key processes. Key internal processes present production, internal logistics, human resources and economics. The essential sense of these systems is to integrate the particular company functions on the level of a whole company, vice versa to integrate various, in company used, applications securing information needs of individual departments to one unit working on the mutual data basis, and to decrease the risk of ineffectiveness related to processing and occurrence of several errors in the company data.

The economics management is a typical supporting process which does not add any value, does not have any customers and does not generate any sales. The system of economic process management is based on information from financial accounting.

The accounting as regards its character and the range of provided information forms the base of company information system while it records and provides information which from the point of quantitative view presents the recording of all data about ongoing economic activity, status

of assets, equity and liabilities, from the point of qualitative view they are presented by the following characteristics:

- comparability,
- objectivity (disinterest, verifiability, unbiased),
- accuracy (accounting information should be actual and at disposal in an adequate time),
- explicitness (information is clear and logic),
- relevancy (helping users to predict the future).

It is considered to be an essential tool in the management of companies. It is able to record the real continuance of entrepreneurship activity and to manage the assessment of achieved results. Accounting information has a pragmatic use in all management phases of processes. The whole accounting information system can be divided into three parts:

1. basic accounting – financial accounting – it provides the unified file of company information as a whole and its relations to the external environment,
2. intra-organizational accounting – includes information on structures and relations inside a company. It records and provides information mainly for operating management focused on intra-organizational departments of a particular accounting entity. Intra-organizational accounting is closely related to calculations and budgeting,
3. managerial accounting – secures data for short-term and long-term decision making, tactical strategic management, utilizes data of financial and cost accounting, operating evidence, mathematical – statistical methods and analysis.

The financial accounting is considered to be the base of all financial operations in companies. The total range within ERP systems generally includes:

- Financial accounting – general ledger, receivables, liabilities, cash, electronic banking.
- Cost accounting – accounting of cost centres, accounting of profit centres, cost accounting of contracts and projects, performance settlement, support ABC (Activity Based Costing).
- Controlling – continual and actual management of costs, revenues, sources and terms, the connection of business transactions to all areas of controlling is the assumption of detailed analyses of plans and reality. It is a crucial tool of strategic planning respecting the specifics of particular countries and supporting the options for reporting.
- Administration and bookkeeping of fixed assets, planning and monitoring of acquisition of fixed assets and investment actions. Integration by means of application for accounting and logistics support various accesses to control and managing interventions and to optimal using of company investments.
- Managing of cash, analysis of liquidity, cash flow, financial planning and budgeting, managing of risks, money trades, currency transactions and securities.
- Calculation and bookkeeping of wages and salaries.
- Reporting in accordance with e.g. IFRS, GAAP.
- Bookkeeping in foreign currencies and foreign exchange differences.

Based on the before mentioned the accounting needs to be treated as an unsubstitutable tool of financial management of an accounting entity which orients on the past and description of present but fully influences also the future development of company economics. Currently companies need to have at disposal an overview of cash flows running within an organization. The entrepreneurship tempo is steadily rising therefore it requires the ability to predict the trends before they actually happen and mainly to react quickly. The reaction period is closely related to a financial company performance. It is indispensable to monitor potential

opportunities and perform required changes. In a global competitive environment the situation of a company needs to be maximized on a daily basis, so it cannot allow critical financial indicators to be lost in the flood of data. People working with information need the tools for decision making support which will fulfil a function in a real time. Several traditional separate financial systems automate only particular business functions and not the business process as a whole. They frequently require work intensive procedures e.g. repeated manual data entries to various systems. Mainly old systems are not flexible, they do not allow organizations to change processes of a business and react to new market requirements. They do not provide any overview of processes within a whole organization and not even in an extended form which includes e.g. Customer Relationship Management (CRM), Supply Chain Management (SCM). Current ERP systems can mainly help the financial department in case a company is competing with the following issues:

- It requires an actual financial overview across individual areas of entrepreneurship in order to ensure the financial health; the table processor/spreadsheet is no longer sufficient.
- It acts in several countries, wants to spread its business and perform acquisitions.
- It is obliged to keep the accounting and disclose statements in accordance with the standards US GAAP and IFRS (International Financial Reporting Standards), belongs to Sarbanes-Oxley Act or other special directives of international or national legislations shall be applied.

Financial systems which meet the requirements of large companies should standardly contain clusters and graphic tools with the support of performance indicators (Key Performance Indicator, KPI). These functions enable the results to be clearly visualized and provide managers (top as well as directors of individual business areas) with data in a simple form which are needed for qualified decision making on a short-term and long-term horizon. Strategic use of these sources enables to manage a company with regards to critical events and not to be overwhelmed by various financial variables. Currently the standard financial panels and tools for KPI offer e.g. monitoring of daily sales, assessment of customers and suppliers, planning of sales but as well as the development of cash flow.

On the base of evidence for financial transactions occurring in the production applications the ERP system provides information for modelling and realization of cash flow in a company. It provides tools of the work with financial operations while it manages a targeted influence on cash flows, compares proposals, plans with present realization, determines a financial discipline in a company but as well as in business partners.

Main advantages of the ERP systems for company management present higher effectiveness of existing processes. One of the biggest mistakes which are performed by companies is the fact that they do not utilize the potential which is offered by a new system and existing processes are changed only in a minimum or employees usually return to the old manner of work. Concrete quantified advantages are as follows:

- Decrease in inventory values as a consequence of better planning of sales and production and better overview of amounts and physical placement of inventories,
- Decrease in operating costs as a consequence of new information available in a real time - monitoring of production processes, material flows, status of orders, production planning and others.
- Decrease in distribution costs as a consequence of increase in supplier service (supplies in time and in requested quality),

- Decrease in costs of goods and service purchase as a consequence of possibility for aggregation and analysis of cost items and optimization of supplier portfolio,
- Better utilization of supplier discounts on earlier invoice payments as a consequence of automated payment processes and invoice processing,
- Decrease in costs of ordering and invoicing as a consequence of automated ordering and invoicing cycle.

Nowadays cloud solutions are gaining ground among small and medium companies which bring a new view on costs related to the software utilization from the user prospective. They change a current model which has required the software purchase, to a model in which the user does not pay for software but he pays for the utilization of software. Users are gradually becoming used to utilize software as a service and this creates the premise that in a few years cloud computing will become a standard which will cover the majority of customer requirements for IT solutions.

One of the offered solutions is the online accounting and billing software providing the possibility of free bookkeeping or tax records in a user friendly and simple environment. It guarantees a continual support, development pursuant to the legislation requirements, maximum security approved by the Certificate of Information Security Management Systems in accordance with the norm ISO 27 001 and the flexibility according to customer needs. Therefore it is an adequate alternative of classical on premise ERP solutions. It brings the wide range of tools including single and double entry bookkeeping, billing and stock, which are available on the web. This software is an accounting available from equipment with internet explorer. It decreases costs of hardware purchase and its administration. It guarantees non-stop availability, security of saved data, simple user interface, support and actualization. Except for before mentioned functionalities also offers the managerial information available regardless of location and time. The Facebook sign up, support via discussion forum and multilingualism are as a matter of course.

4. Conclusion

The complex information system of ERP category developed for the management of various types of entrepreneurs and budgetary, contributory or non-profit organizations of state administration in a real time provides essential information on status and development of an organization needed for key decisions. It uncovers new opportunities or reserves, manages to react flexibly and utilize them. It helps to increase competitiveness and to strengthen a market position. It provides fully integrated tools for the management of economic-financial processes in a real time and a qualitative tool for the creation of statements according to own needs and requirements. Based on the information from primary and economic processes it enables to accept decisions for effective company management. Modern ERP system contains applications for financial management which at the same time allow global delivery and local configuration to meet local specifications of financial and tax regulation requirements. It is obliged to manage key data, secure compliance with local regulation terms and as well as data consistency which allows to perform distributed business operations in a real time, increase customer satisfaction, operation effectiveness, and finally also the company performance.

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Blue Ocean Strategy – Selected Issues

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Abstract

The paper is devoted to the concept of Blue Ocean Strategy (BOS), gaining growing interest from both theoreticians and practitioners of management. This concept by the researchers W. Chan Kim and Renée Mauborgne was formulated a slightly over a decade ago as a result of several years of studies on the essence of strategic moves of enterprises. This is an interesting proposition for practitioners due to a wide range of instruments and a range of specific recommendations, which, since the proposition by M.E. Porter, has been the exception rather than the rule.

In the study, there have been presented the basic assumptions of BOS, characterized its most important tools and described the principles of reconstruction of market boundaries allowing to begin the formulation of own Blue Ocean Strategy - the strategy that assumes creating new, competition-free market space allowing to concentrate on business development rather than competition.

Keywords: strategy, management, strategy management, Blue Ocean Strategy.

JEL Classification: M30, M31

1. Introduction

In order not to operate in chaos, the enterprise needs a vision, a goal and a plan to strive for this goal, i.e. when translating this into the language of management, the enterprise needs a strategy. Most frequently it is understood as an integrated and coordinated set of activities designed in a way that allows to use best the possessed resources to achieve competitive advantage.¹ The strategy is something which has a fundamental impact on life or death, success or failure of a company.²

It is assumed that a good strategy requires *intellectual simplicity*. The strategy must be complex and simple at the same time, based on a few principles, which form a coherent whole.³ Some researchers claim that managers should select a few key strategic processes and concentrate their efforts on them. These processes may refer to: innovation, product, partnership, entering new markets etc. A good strategy should be characterized by *external coherence*. It must be adapted to market trends and to the environment. The third element of a good strategy is *internal coherence*. Programs and activities must mutually support and strengthen each other, i.e. there is so called feedback. The last element of a good strategy is *comprehensibility*. The strategy must be explainable to the stakeholders of the company. Only in this way can it be understood and accepted by them.

¹ M.A. Hitt, R.D. Ireland, R.E. Hoskisson, *Strategic Management: Competitiveness & Globalization, Concepts*, South-Western Cengage Learning, 2011, 9th Edition, p. 4.

² K. Obłój, *Strategia organizacji. W poszukiwaniu trwałej przewagi konkurencyjnej*, Polskie Wydawnictwo Ekonomiczne, 2007, p. 19.

³ B. Nogalski, J. Rybicki, A. Szpitter, *Strategia jako system prostych zasad działania*, [in:] *Krytyczna analiza szkół i kierunków zarządzania strategicznego. Nowe koncepcje zarządzania*, R. Krupski (ed.), Prace Naukowe Wałbrzyskiej Wyższej Szkoły Zarządzania i Przedsiębiorczości, Seria Zarządzanie i Marketing, Wałbrzych 2004, pp. 23-33.

Both theoreticians and practitioners of management constantly search for the strategy whose implementation gives high probability to achieve market success. The concept of Blue Ocean Strategy is inscribed in this demand.

The aim of the present study is to present the basic assumptions of the concept of BOS, characterize its most important tools and describe the most significant principles allowing to reconstruct market boundaries and begin the process of the formulation of own Blue Ocean Strategy.

2. General assumptions of Blue Ocean Strategy

The concept of Blue Ocean Strategy was developed by Chan Kim'a and Renée Mauborgne. The authors are well known figures in the scientific world. They publish their works in the leading journals. In 2005 they published the book entitled: *Blue Ocean Strategy. How to Create Uncontested Market Space and Make the Competition Irrelevant*. 3.5 million of copies of the book, translated into 44 languages, were sold within a decade. The book has won many prestigious awards and recognition among managers.

As a result of the research, the authors noticed that enterprises, while searching for sustainable growth, tend to apply head-to-head competition. However, in today's world, long-term success in business is more and more often the result of giving up competition and creating new market spaces, unused so far. One of the ways to beat competitors is to stop trying to beat them.⁴

The authors propose to look at the economy as the world that consists of two oceans: the red one and the blue one.

Red oceans amount to industries existing nowadays. The competitive fight is based on traditional assumptions. Enterprises are trying to outdo their competitors and grab the largest part of the market. Whereas the market space is becoming increasingly congested, growth prospects are increasingly uncertain. Offered products rapidly lose their distinctive features and become standard products and "life or death" competition is becoming the ocean full of blood of competing rivals.

On the other hand, blue oceans are industries not existing nowadays yet. It is unknown and unused market space, creating the demand and opportunity for growth. In blue oceans, competition is irrelevant since the rules of the game are yet to be established.⁵

As a concept, blue oceans are not new. Many industries, which are mature now, did not exist some time ago. Along with technical and technological progress we observe the emergence of increasingly new industries. They used to be blue oceans providing their creators and first participants with development potential, unlimited by competition. At present, along with an increase in competition, that space has been filled up with increasingly saturated red. In order not to lose own potential to fight against competitors it is worth searching for new space – own blue ocean.

What distinguishes the winners from the losers is the approach to the strategy. The companies imprisoned in red oceans have applied the conventional strategic approach. The creators of blue oceans do not compare themselves with competitors using indicators or do not use commonly applied strategic tools. They use a completely different strategic logic which has been called value innovation.

⁴ Kim W.Ch., Mauborgne R., *Strategia błękitnego oceanu. Jak stworzyć wolną przestrzeń rynkową i sprawić, by konkurencja stała się nieistotna*, Wydawnictwo MT Biznes, Warszawa 2010, p. 18.

⁵ Ibidem, p. 19.

Value innovation occurs when companies combine one innovation with utility, assessment and costs. It is contradictory to the widely recognized dogma which assumes the necessity to choose between value innovation and cost.

Creating the blue ocean is about simultaneous lowering costs and increasing value for customers. The value for the customer results from utility and assessment of the range of products addressed to the purchaser. The value for the enterprise results from prices and costs of offered products. The whole may work if it is properly configured. In this sense, it is something more than only innovation. It is the strategy including the whole system of enterprise activities. Value innovation requires from companies to orient their entire system to achieve sharp rise in value, both for the customer and themselves.⁶

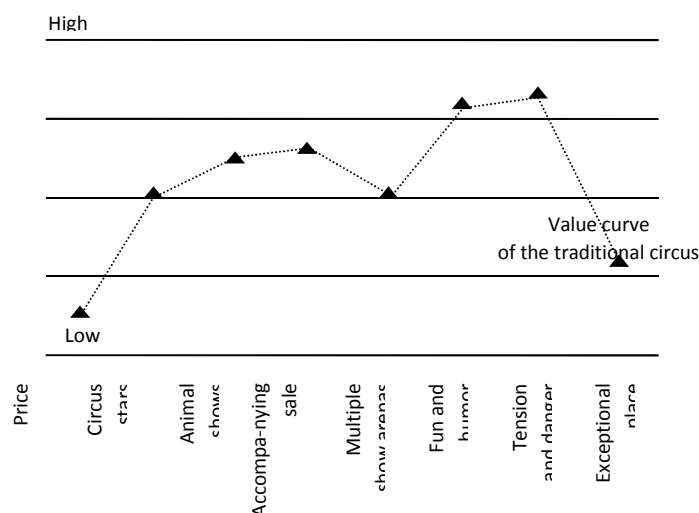
3. The instruments of Blue Ocean Strategy

The formulation and implementation of the strategy requires the sequence of specific activities and strategic tools. In the paper, there have been presented the most important ones: a strategy canvas, four actions framework, eliminate-reduce-raise-create grid.

A *strategy canvas* is both a diagnostic scheme and the scheme of actions aimed at building Blue Ocean Strategy. A strategy canvas allows for graphical presentation of the most important competitive factors in the specific industry. At the same time, these are the areas of intensive investments realized by competitors. Simultaneously, we obtain the information, which consequently customers receive.

The basic element of a strategy canvas is the value curve which maps the level of each important competitive factor in the industry, typical of it. It is assumed that these factors are the elements which are to determine success. The value curve, built on the basis of these assumptions, allows to answer the question what competitors concentrate their efforts on. Therefore, it is the starting point for building Blue Ocean Strategy. For the circus sector, such factors are: ticket price, costs of gaining circus stars, animal shows, accompanying sales, multiple show arenas, fun and sense of humor, tension and danger, uniqueness of the place. It is presented in Figure 1.

Figure 1: A strategy canvas of the traditional circus



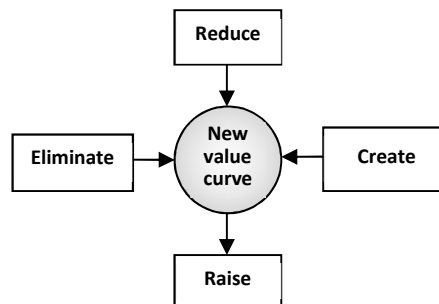
Source: Kim and Mauborgne, 2010, p. 69.

⁶ Ibidem, p. 37

This curve is the starting point for the analysis of the factors from the point of view of customer value and consequently, for the reconstruction of this curve to maximize this value.

Four actions framework is the tool allowing for reconstruction of the elements of value for the customer and creating a new value curve. The starting point is four questions allowing for finding a compromise between variety and low cost: which of the factors can be eliminated, which of the factors can be reduced significantly below the standards in the industry, which of the factors can be strengthened significantly above the standards in the industry, what factors, previously not offered by the industry, should be created. The graphical presentation of the tool is shown in Figure 2.

Figure 2: Four actions framework



Source: Kim and Mauborgne, 2010, p. 54.

The supplement and addition to four actions framework is eliminate-reduce-raise-create grid. It forces the company not only to pose four questions concerning four actions mentioned above but also to take actions to create a new value curve. Its graphical form is presented in Figure 3.

Figure 3: Eliminate-reduce-raise-create grid

Eliminate	Raise
Reduce	Create

Source: Kim and Mauborgne, 2010, p. 63.

4. The reconstruction of market boundaries as an introduction to formulating BOS

The first step in formulating BOS is the reconstruction of market boundaries allowing to break away from competitors and create blue oceans. On the basis of their research, the authors isolated the patterns for creating blue oceans. They are described in the subsequent part of the study.

Looking at alternative sector may contribute to creating new market space. The company competes not only inside the industry but also with manufacturers of alternative products. In order to satisfy their needs, the customer does not always need a substitute. Sometimes a better choice will be an alternative product, which admittedly is different from base products both in terms of form and functionality but it is offered for the same purpose.

Therefore, it necessary to identify alternative industries and find the answer to the question why customers just choose, among others, between the products of these industries. While concentrating on key factors making customers choose between these alternatives, it is possible to create new free market space.

Looking at strategic groups in industries. All companies in the industry can be arranged according to a specific hierarchy. This order is usually indicated by prices and achieved results (e.g. producers of luxury and popular cars). The key to create new market space is to break this perception of the market and understand what factors influence customer decisions when switching from one group to another. For this purpose it is necessary to identify strategic groups present in a specific sector and find the answer to the question why customers choose goods from a particular group. Another step is to provide the product of desired characteristics from both strategic groups.

Looking at customer chains. In most industries, competitors define customers in a similar way. However, the customer is understood as the one that pays for the product or makes a decision on the purchase. These are not always the users of goods. For instance, the purchases for corporate employees are often made by means of price criterion, not functionality. In the pharmaceutical industry, the target group is more frequently doctors who will prescribe the medicine to patients who will take it. When redefining the figure of the customer themselves, while identifying them with the end user, it is often possible to notice new sources of values.

Looking at the offers of complementary products or services. While buying a specific product we decide on particular utility solutions but also there is also the necessity to incur specific costs resulting from its utilization, often associated with it. Therefore, the value which a specific product has for the customer is then affected by other products and services. The potential to create free market space is just in these complementary products. The priority is to find the solution which will constitute a new value for the purchaser. To enable this, it becomes necessary to identify major constraints and drawbacks associated with the use of specific goods and subsequently eliminate them by offering complementary products or services.

Looking at functional and emotional factors in buyers. Different products satisfy customer needs differently. Products with utility functions are often advertised in terms of their functionality, frequently with reference to their low prices. Some products are advertised in terms of emotions. The price is not important in here. Emotions associated with the possessing of a specific product, belonging to a particular type of community of the owners of such products are more important.

The companies attempting to undermine the status quo can find new market space. For example, the companies using the functional and utilitarian approach may attempt to expand their offer by referring to emotions. And vice versa, the companies offering the products traditionally relating to emotions can attempt to reduce these elements while simultaneously emphasizing utility values. In other words, some emotions may be added to functionality and some functionality may be added to emotions, by means of the above creating a new value for the customer.

See time perspective. All industries are subjected to specific external trends, e.g. globalization. These trends may create an opportunity for the development of new market space. The necessary condition is an attempt to predict how these trends will influence the value for customers. When comparing the value carried by today's market offer with the projection of its value in the future it is possible to find new market space.

4. Conclusions

BOS is a very interesting proposition in the field of strategic management. The origins of strategic management were dominated by the approach assuming the necessity of planning.⁷ However, the greatest popularity so far has been gained by the approach emphasizing the necessity to compete. The creator of this approach - M.E. Porter suggested appropriate instruments which relatively easily and transparently allowed to show the specific company against the background of business rivals or the whole sector, present strengths and weaknesses, the sources of potential success and possible failure, the forces in the sector.⁸

In the framework of strategic management, the approach, assuming that environmental variability brings about divergence of forecasts of each strategic plan from the real situation, also enjoyed popularity for some time. This approach has the disadvantage that its objectives cannot be used in the practice of management.

The last years have been dominated by the resource-based view, which assumes that the condition of success of the company is its rare and unique resources, which additionally are excessive to some extent, which is to be the condition necessary to initiate the process of business development.⁹

All of the above approaches, except for the positioning approach, do not provide at all, or to a very limited extent, appropriate instruments, which may be used in practice to build and implement an appropriate development strategy. This gap is filled in by BOS.

BOS responds to the challenges of, most of all, management practitioners. Theoreticians will find the assumptions known from the theory of the market niche in this concept. For practitioners, the most important is the fact that the concept by Ch. Kim and R. Mauborgne contains specific recommendations and instructions on how to proceed in order to create free market space and how to fill in this gap. Additionally, this approach includes the entire set of instruments allowing to determine the status of the current market offer in the sector, reconstruction of the existing market boundaries as well as reconstruction of the value curve for the customer. It is the level of strategy operationalization that is largely responsible for the success of this concept in the managerial environment.

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⁸ M.E. Porter, *Competitive Strategy: Techniques for Analysing Industries and Competitors*, The Free Press, New York 1980; M.E. Porter, *Competitive Advantage*, The Free Press, New York 1985.

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Sectoral differences in economical results of newly created businesses: example of Poland

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Abstract

The development of entrepreneurship is often accompanied by economic growth, the creation of innovative solutions and the improvement in the society's welfare which comes from the stimulation of the labour market and increased consumer wealth. Entrepreneurship, therefore, can be regarded the motor of the economy, regardless of the way it is understood as entrepreneurship is a multi-aspect notion. The article assumes that entrepreneurship is the capability to create and maintain new economic entities on the market. The goal of the study is to assess the economic effects of companies from different sectors of Polish economy which were created in the 2011-2015 period. The analysed enterprises are grouped in sectors. With the use of linear ordering methods, a ranking of sectors was made according to the achieved economic goals and barriers in running a business for companies created in the 2011-2014 period and still functioning in 2016.

Keywords: *economical results, entrepreneurship, newly created businesses*

JEL Classification: *D00, L20, M21*

1. Introduction

Changes in the environment such as the increasing globalisation of markets, growing competitiveness and consumer wealth, which fuels changes in the lifestyle of society, contribute to the development of entrepreneurship. There is no one generally accepted definition of entrepreneurship (Popescu, 2014, p. 512). It can be interpreted in many ways (Cejda & Jolley, 2014, p. 92; Turek, 2016, pp. 91-92; Jelonek, 2015, p. 1014) due to its complexity (Gołębowski, 2014, p. 9). The most common idea of entrepreneurship is the ability to increase the number of businesses (Illés, Dunay, Jelonek, 2015, p. 48) as new firms contribute to: economic development, industry evolution, job creation, fostering competitiveness, innovation and wealth creation (Eftekhar & Bogers, 2015, p. 574), also thanks to the creation of personal networks of entrepreneurs (Tomski, 2016, p. 438), which give new ideas and initiatives (Žitek & Klímová, 2016, p. 1131). Entrepreneurship is also understood as the identification and utilization of development opportunities regardless of owned resources (Czarniewski, 2016, p. 33). Therefore it is connected with such areas as new organizational forms, fostering innovation, cooperation with the environment (Markman, Russo, Lumpkin, Devereaux (Dev) Jennings & Mair, 2016, p. 675). Entrepreneurship is a particular type of action focusing on: „absorptivity and openness of organizations to innovation, systematic measurement of effectiveness of implemented innovation, undertaking some specific actions concerning organizational structure, staffing, principles of management of teams of employees, wage system, reward system, avoiding doing things which are not allowed in business management” (Kościelniak, 2016, pp. 65-66).

Entrepreneurship contributes to economic growth and the efficiency of production factors, it leads to increased employment and effectiveness (Tiberiu Albuлесcu, Tămășilă and Tăucean, 2016, p. 246), and results in the improved welfare of the society (Coduras, Saiz-Alvarez and Ruiz, 2016, p. 100). Together with innovation and enterprise dynamics, entrepreneurship is the

key element of a prosperous economy (Squicciarini, 2017, p. 273). Hence entrepreneurial activity is desired and should be supported so that it yields better effects. Subject literature increasingly uses the idea of entrepreneurship policy whose goal is to promote entrepreneurship (Baumol, Litan, Schramm, & Strom, 2010, p. 4), because in times of crisis it has become a priority for governments (Davis & Lunati, 2010, p. 49). The development of entrepreneurship should be supported by state programs (Tumen, 2017, p. 265), because it stimulates the economic growth, innovation and productivity (Hopp & Sonderegger, 2015, p. 1092; Morgan, Orzen, Sefton & Sisak, 2016, p. 421). Economic policies and institutions should create entrepreneurial activities and investments (Aghion, 2017, p. 9).

The present study sees entrepreneurship as a capability to create new enterprises, their ability to survive on the market and the effects of their activity depending on their stability expressed by the number of years of functioning on the market. The goal of the article is to examine the economic effects of enterprises from individual sectors of Polish economy. The data from the Polish Central Statistical Office on enterprises created in the 2011-2014 period and still active in 2016 are analyzed. The selection of years was conditioned by the accessibility and completeness of data.

2. Tendencies in the development of entrepreneurship in Poland

Entrepreneurship is not just an ability to exploit opportunities but also to foresee and overcome risks connected with conducting business. The often mentioned managers' entrepreneurship competences are: ability to discover new opportunities and attitude towards uncertainty and risk (Dominguez, Varajão, Morgado, Oliveira & Sousa, 2010, p. 276). The complexity and uncertainty of the environment in which enterprises function is the source of risk as well as competitive advantage (Gorzeń-Mitka & Okręglińska, 2014, p. 403). The success of a business lies in the ability to recognize the barriers hindering its functioning and find solutions to encountered problems. Accordingly, the barriers for conducting economic activity in the economic sectors were divided into supply and demand related. Table 1 presents the number of enterprises of the individual sectors of the Polish economy which were started in the 2011-2015 period and were still operating in the following year.

Table 1: Number of enterprises which were started in the 2011-2015 period and were still operating in the following year

Sector	Enterprises establishment year/ Survey year					Average rate of change
	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	
Industry	19 817	18 849	18395	18 953	15 176	-6.45%
Construction	34 642	32 997	28099	30 642	25 545	-7.33%
Trade and repair of motor vehicles	55 324	59 510	55408	44 503	37 486	-9.27%
Transportation and storage	13 937	12 006	8756	14 612	11 384	-4.93%
Accommodation and food service activities	7 002	7 687	5657	7 817	5 211	-7.12%
Information and communication	9 863	10 801	11513	12 123	11 523	3.97%
Real estate activities	2 286	2 603	2395	6 603	4 730	19.94%
Professional, scientific and technical activities	24 479	24 682	26302	26 012	22 636	-1.94%

Administrative and support service activities	9 528	8 590	10298	11 387	9 559	0.08%
Education	5 498	6 118	4772	8 085	6 748	5.25%
Human health and social work activities	11 603	11 726	11838	15 012	12 176	1.21%
Arts and recreation	1 323	1 291	1390	4 615	3 382	26.45%
Other service activities	11 488	12 678	11221	13 746	9 872	-3.72%

Source: Own elaboration based on Central Statistical Office, 2015 and Central Statistical Office, 2017

In the 2012-2016 period we observe an annual average decrease in the number of businesses functioning for a year in the majority of Polish sectors. The steepest drop occurred in the trade and repair of motor vehicles sector. The decrease could be the result of change in the policy of managing end-of-life vehicles and in the age structure of cars in Poland. A significant annual average increase in the number of enterprises functioning on the market for a year is observed in the sectors: arts and recreation and real estate activities. Such positive changes are connected with the alteration of the common life style into a more active one and with the growing welfare of the society. Table 2 presents the survival rate of enterprises established in a given year and still active in the following year.

Table 2: Survival rate of enterprises established in a given year and still active in the following year

Sector	Enterprises establishment year/ Survey year					Average rate of change
	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	
Industry	83.0%	72.7%	75.4%	na	65.6%	-5.71%
Construction	77.2%	72.7%	68.8%	na	60.6%	-5.87%
Trade and repair of motor vehicles	69.7%	76.9%	73.6%	na	68.9%	-0.29%
Transportation and storage	80.0%	79.4%	61.0%	na	62.8%	-5.87%
Accommodation and food service activities	63.0%	61.9%	58.2%	na	54.7%	-3.47%
Information and communication	88.2%	83.6%	85.9%	na	82.8%	-1.57%
Real estate activities	70.1%	63.3%	57.9%	na	65.4%	-1.72%
Professional, scientific and technical activities	87.3%	84.3%	82.2%	na	72.5%	-4.54%
Administrative and support service activities	79.3%	68.3%	73.5%	na	72.6%	-2.18%
Education	69.6%	75.6%	60.3%	na	80.8%	3.80%
Human health and social work activities	74.2%	80.9%	88.1%	na	81.7%	2.44%
Arts and recreation	67.6%	66.2%	65.7%	na	71.9%	1.55%
Other service activities	85.8%	86.2%	83.3%	na	71.7%	-4.39%

Source: Own elaboration based on Central Statistical Office, 2015 and Central Statistical Office, 2017

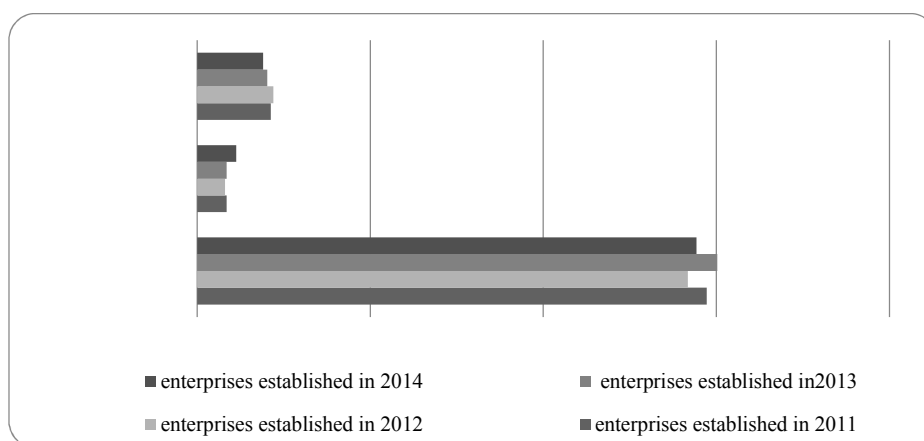
Note: na – not available

The highest index of survival characterized businesses started in 2011 - and so the highest percentage of these enterprises was still active in the year 2012. In general, an annual average

decrease of the survival rate is observed for the sectors which also showed an annual average decrease in the number of companies functioning for a year. Only the following sectors are exceptions to that: information and communications, real estate activities, administrative and support service activities. These sectors showed an annual increase in the number of enterprises which were still active after a year of activity with a simultaneous annual decrease of the survival rate. It means that over the 2012-2016 period the percentage of businesses which were able to survive a year on the market was decreasing on an annual average, which can be the result of severe competition and financial problems of the enterprises.

Entrepreneurship is not just an ability to utilize opportunities, but also to overcome risks for enterprises. The success of a business lies in the ability to recognise the barriers for its functioning and find solutions to encountered problems. This became the starting point for the analysis covering the barriers in conducting economic activity in Poland which were divided into supply and demand related. Figure 1. shows structure of enterprises established in a given year and active until 2016 by types of encountered difficulties. The data present the situation observed in 2016 for the businesses of various age.

Figure 1: Structure of enterprises established in a given year and active until 2016 by types of encountered difficulties

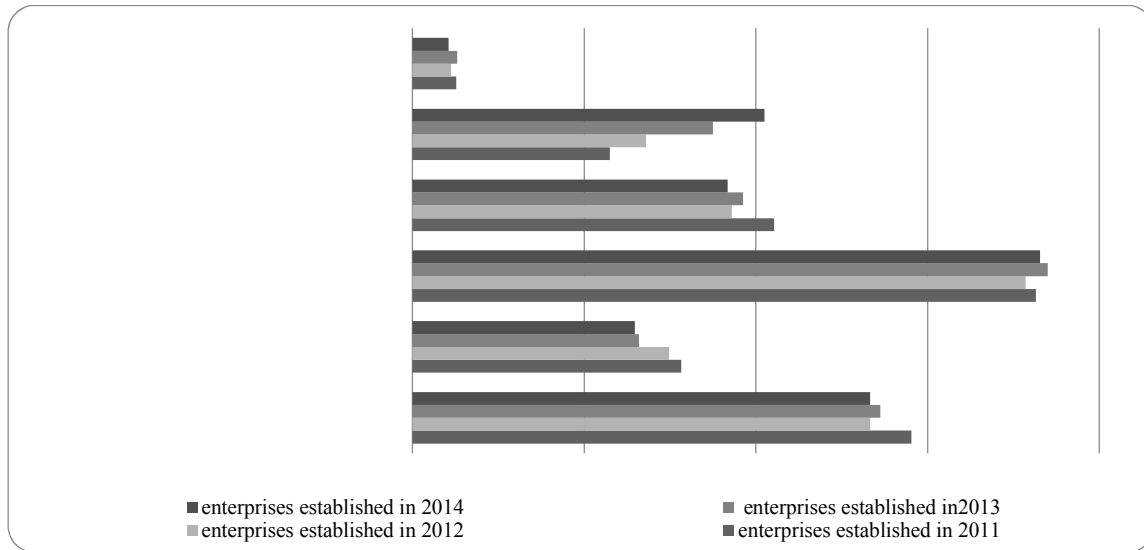


Source: Own elaboration based on Central Statistical Office, 2017

More than half of Polish enterprises reported no supply or demand difficulties in their activity. The others encountered supply barriers more often than demand problems which is connected with the costs of their functioning and legal regulations. It should also be noted that it is the supply factors that are most often indicated among competitive factors (Sipa, Gorzeń-Mitka & Skibiński, 2015, p. 446). The structure of enterprises indicating individual barriers is similar, regardless of the year they were established in.

On figure 2 the percentage of enterprises established in a given year and active until 2016 by reported demand difficulties was presented.

Figure 2: Percentage of enterprises established in a given year and active until 2016 by reported demand difficulties

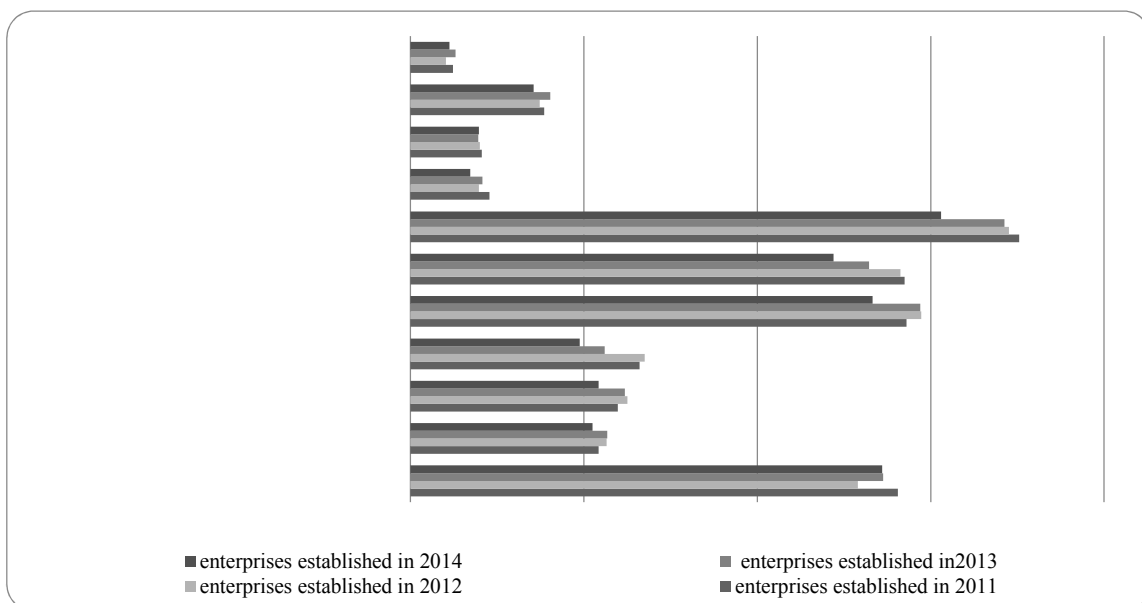


Source: Own elaboration based on Central Statistical Office, 2017

Irrespective of the year of creation, the difficulties indicated by the enterprises in 2016 were usually connected with too severe market competition and insufficient funds of the clients. It is important to see that the highest percentage of enterprises which encountered these problems were the ones started in 2011 and, accordingly, functioning on the market for six years. This leads to the conclusion that businesses functioning longer on the market are afflicted by excessive competition and lower wealth of clients more often than young businesses. It stems from the fact that fresh businesses usually compete with the price.

Figure 3 presents the percentage of enterprises established in a given year and active until 2016 by reported supply difficulties.

Figure 3: Percentage of enterprises established in a given year and active until 2016 by reported supply difficulties



Source: Own elaboration based on Central Statistical Office, 2017

When it comes to supply barriers, the most indicated ones were: high non-wage labor costs, vague, inconsistent, unstable legislation, high payments to the state and insufficient financial resources. In the case of high non-wage labor costs, we observe a much higher percentage of indications by businesses established in the 2011-2013 period than for enterprises operating on the market shorter. As far as the other frequently mentioned difficulties are concerned, the percentage of businesses looked similar regardless of their age.

The barriers which enterprises face influence their economic results. The level of the results depends on the scale of the occurrence of supply and demand difficulties as well as the ability to overcome them. The analysis focused on the economic results of enterprises of individual Polish sectors established in the 2011-2014 period and still active in 2016. The sectors with the highest results were indicated.

3. Data and Methods

It is proposed in this study to classify economical results of the sectors analysed using the following diagnostic features:

<i>SR</i>	– Survival rate 2016/2015 ¹⁰ ,
<i>MGWS</i>	– Monthly gross wages and salaries per 1 paid employee in zł,
<i>PEE</i>	– Percentage of enterprises established in a given year and covered outlays on fixed assets in 2015, active until 2016,
<i>PEP</i>	– Percentage of enterprises with profit,
<i>PEND</i>	– Percentage of enterprises established in a given and active until 2016 with no difficulties,
<i>PEDSD</i>	– Percentage of enterprises established in a given and active until 2016 with demand and supply difficulties.

Variable *PEDSD* is destimulant (variable whose falls in quantity indicates desirable development of the complex phenomenon examined) while the other ones are stimulants (variables whose rise in quantity indicates desirable development of the complex phenomenon examined). In order to ensure a better data comparability the values of each variable were proposed as intensity ratios.

The differences in the degree of the realization of individual economic effects were examined with the use of numerical taxonomy, and particularly the ordering of multi-characteristic objects. The ordering was based on the development benchmark method. To this end the following was done:

- the benchmark object was generated,
- Euclidean distances of individual objects from the benchmark were determined,
- development measures were calculated - normalized values of the distance from the benchmark determined according to formula (1):

$$x'_i = \frac{x_i - x_{\max}}{-(x_{\max} - x_{\min})} \quad (1)$$

where x_i – the value of the i element of variable, x_{\max} – maximum value of variable, x_{\min} – minimum value of variable,

¹⁰The proportion of companies established in a given and is still active at the time of the survey in 2016, to all enterprises created in a given year, which is still carrying on business in 2015.

- the objects were ordered according to the decreasing values of the development measure: the higher the level of the measure, the closer is the object to the benchmark, values of the measures are in the range [0; 1].

In order to verify the assumption of the stability of economic results achieved by newly established enterprises in the individual sectors of Polish economy, it was determined if there exists a similarity between the orderings of the years of businesses' creation. The Spearman rank correlation coefficient was calculated according to the formula (2):

$$r_s = 1 - \frac{6 \cdot \sum d_i^2}{n \cdot (n^2 - 1)} \quad (2)$$

where: d_i – the difference between the positions occupied by the rankings for a given sector, n - the size of the statistical sample.

3. Results and Discussion

The ordering was carried out for enterprises established in the 2011 - 2014 period and still active in 2016. The analysed variables were standardised and values of a synthetic development measure were estimated for each sector. With such values, a ranking of sectors was made by the extent of level of economical effects. The results are presented in table 3.

Table 3: Results of linear classification – synthetic measure of development of the economical results of enterprises which were established in the years 2011-2014 and active until 2016 year grouped in economic sectors

Sector	Year of establishment of enterprises							
	2011		2012		2013		2014	
	Development measure	Ranking position	Development measure	Ranking position	Development measure	Ranking position	Development measure	Ranking position
Accommodation and food service activities	0.1389	12	0	13	0.0614	12	0.0746	10
Administrative and support service activities	0.4256	4	0.4491	6	0.2908	6	0.4570	4
Arts and recreation	0.3719	5	0.4514	5	0.1672	9	0.2110	8
Construction	0.2095	11	0.1303	12	0.1462	10	0.0453	12
Education	0.2368	8	0.432	8	0.2088	7	0.2692	7
Human health and social work activities	0.5371	3	0.6619	1	0.7094	1	0.6109	2
Industry	0.3255	7	0.4325	7	0.3256	4	0.3223	5
Information and communication	0.5456	2	0.5561	2	0.5512	2	0.7670	1
Other service activities	0.2235	9	0.2446	10	0.2039	8	0.0623	11

Professional, scientific and technical activities	0.5961	1	0.5497	3	0.4304	3	0.5500	3
Real estate activities	0.2225	10	0.3456	9	0	13	0.1959	9
Trade and repair of motor vehicles	0	13	0.1486	11	0.1176	11	0	13
Transportation and storage	0.3609	6	0.4779	4	0.3245	5	0.2754	6

Source: own calculations

The highest values of development measures are noted for the professional, scientific and technical activities sector (which is the best in the case of enterprises established in 2011, and the third in the case of enterprises established in 2012, 2013 and 2014), the information and communication sector (which is on the second position in the case of enterprises established in 2011, 2012, 2013 and on the first position in the case of enterprises established in 2014) and the human health and social work activities sector (which is the third in the case of enterprises established in 2011, the first in the case of enterprises established in 2012 and 2013, and the second in the case of enterprises established in 2014).

The lowest values of development measures are observed for:

- the trade and repair of motor vehicles, accommodation and food service activities and construction sectors in the case of enterprises established in 2011,
- the accommodation and food service activities, construction and trade and repair of motor vehicles sectors in the case of enterprises established in 2012,
- the real estate activities, accommodation and food service activities and the trade and repair of motor vehicles sectors in the case of enterprises established in 2013,
- the trade and repair of motor vehicles, construction and other service activities sectors in the case of enterprises established in 2014.

Attention should be paid to the industry sector which in subsequent years was progressing in the ranking and arts and recreation which in the analysed period of enterprises establishment was clearly losing in relation to the other sectors.

The analysis of development measures which determine the similarity of individual objects to the object the best in terms of a given set of features brings us to the following conclusion:

- In the case of enterprises established in 2011, the development measures were far from unity in the case of the sectors ranked on top places, with the highest value of 0.5961, 0.5456 and 0.5371 for the professional, scientific and technical activities, information and communication and human health and social work activities sectors respectively. Those sectors cannot be considered a model for other sectors.
- The value of the development measure for the best sector in the case of enterprises established in 2014 was the closest to unity.
- The development measure values in the case of enterprises established in 2014 varied much more than the ones of the other years of enterprises establishment.

In order to check the stability of economic effects achieved by businesses in a given section which were started in the consecutive years of the 2011 - 2014 period and functioning in 2016, the Spearman rank correlation coefficient was calculated for the determined rankings. The results are shown in table 4.

Table 4: Spearman rank correlation coefficient

Relationship	Coefficient	p-value
The relationship between the ranking for enterprises established in 2011 and the ranking for enterprises established in 2012	0.934066	$p < 0.05$
The relationship between the ranking for enterprises established in 2011 and the ranking for enterprises established in 2013	0.851648	$p < 0.05$
The relationship between the ranking for enterprises established in 2011 and the ranking for enterprises established in 2014	0.917582	$p < 0.05$

Since the p-value in the test verifying the significance of the calculated Spearman rank correlation coefficient is smaller than 0.05, the null hypothesis about the lack of similarity in the ordering of sectors according to the measure evaluating the economic results of their activity was rejected. It seems plausible, therefore, that the environment for the development of newly established enterprises are similar in individual sectors, regardless of the year of the enterprise's creation.

4. Conclusion

The analysis shows that supply difficulties are the most frequently encountered barriers for entrepreneurship in Poland, which was testified by over 8% of businesses regardless of how long they had been on the market. The demand problems, on the other hand, were a concern for about 3-4% of enterprises. No matter how long they had been on the market, the businesses agreed that the most common barriers connected with supply are high non-wage labor costs, vague, inconsistent, unstable legislation, high payments to the state and insufficient financial resources. The most often listed demand problems have to do with too severe market competition and insufficient funds of the clients.

The fact that more than half of Polish businesses created between 2011 and 2014 reported no barriers for entrepreneurship, can indicate a good economic environment for the development of entrepreneurship in Poland. The improvement in the economic situation in 2011 was reflected in the number of newly started businesses in that year in comparison to the following year.

The sectors where enterprises show best economic effects are: professional, scientific and technical activities sector, the information and communication sector and the human health and social work activities sector. These sectors dominate regardless of the age of businesses which seems to tell us that the economic situation in Poland is especially favourable for the development of these sectors. Unfortunately, due to the fact that the value of the measure is far from unity, these sectors are not paradigms for the others – especially in the case of businesses started in 2011. The fact that the economic effects are not ideal is connected with many barriers, mainly supply related, encountered by businesses in individual sectors.

Economic sectors vary not only in terms of the type of operation but also in the sensitivity to economic change. The dependency of the activity of businesses in individual sectors on legal regulations and administrative norms hinders the development of entrepreneurship even more. Therefore, the analysis of barriers and the economic effects of enterprises is crucial to finding a strategy not just on the scale of individual businesses but also for the whole sectors.

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Current situation in Family Businesses

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Abstract

The submitted paper addresses family businesses, as an increasingly important segment of small and medium-sized business sector. Providing a job for family members, creating values and continuing the tradition are the main reasons for setting up family businesses. This type of entrepreneurship is suitable for development of entrepreneurial activities in regions where large enterprises are not present resp. the business activity of family businesses is not dependent on the existence of large enterprises. The aim of this paper is to highlight the importance and status of family businesses, as well as to clarify the current situation of family businesses in Slovak Republic. We also point out some characteristic features of family businesses in comparison with non-family enterprises. In closing part we also provide recommendations and suggestions for further development in business practice.

Keywords: family business, microenterprises, entrepreneurship

JEL Classification: L25, L26, M13

1. Introduction

Entrepreneurship is a highly debated issue, because it is a basis of market-oriented economy. We cannot imagine a functioning market economy without business entities. The development of business sector is not only a primary issue of professionals, scientists, researchers, but also an issue of politicians, who are responsible for implementation of different measures supporting business activity. Small and medium-sized enterprises require special attention as their ratio on individual markets is between 95-99%. Similar is the situation in the EU, where small and medium-sized enterprises form the backbone of the economy.

Antalík (2012) states, that the emergence of entrepreneurial entities is a natural result of the economic transformation after the socio-political and economic changes in 1989. According to Volek & Novotná (2014) and Kordoš (2016) private businesses have replaced and filled the gap in the newly established market, creating a new business environment.

Business entities hold a prominent position in every emerging economy based on the principles of competition, different form of ownership, as well as the competitiveness of businesses in different size (Jašková & Havierníková, 2016). They are logical and inevitable part of the economy of each country. Their existence is irreplaceable and is in line with the requirements of the globalization and scientific-technological development as it is emphasized by Mižičková & Ubrežiová (2007). According to modern business theory, entrepreneurial activity is such a human based activity that is oriented towards achieving a balance in the economy, a state of the economy when production tools are utilized optimally, considering the characteristics of the economic environment. The private sector produces 90,6% of the GDP, its ratio in trade accounts for 99,8%, construction 99,7%, agriculture 99% industry 85,9%, transport 63,6% and forestry 46,7%. In connection with the increasing demand towards entrepreneurship, the requirements regarding a successful entrepreneur are increasing in the current turbulent business environment. The question is, which entrepreneurs resp. managers will be more

successful in a global environment. The basic types of management approaches are influenced by the following factors:

- competitive strategy and its benefits,
- organizational culture,
- managerial skills,
- external and internal changes in businesses,
- individual effectiveness of management,
- management style,
- evaluation of results and performance of managers.

Not only the Slovak but the wider Central European business environment as well is determined by various influences. The need to monitor changes in the business environment is also highlighted by Strážovská, H. (2015), as further development of enterprises depends on the appropriate, favourable and entrepreneur-friendly environment of the country. It is a duty of all involved to support the further development and viability of business entities by creating an appropriate political, economic and legislative environment.

Over the past decade, as a result of the economic crisis, the payment discipline of businesses has worsened (Andrejovská & Bánociová, 2014), which caused problems in reimbursing the company's own liabilities. Fetisovová, Nagy & Vlachynský (2014) also pointed to the current trend in financing small and medium-sized enterprises, highlighting the need for a sensitive approach to tackle financial problems in this segment of businesses. The need for evaluation of external influences is also emphasized by Subertova & Meszarosova (2015). Increased attention of this segment of businesses is required, because they have an irreplaceable role in employment, generating GDP, creating and implementing innovations. The biggest innovators are micro enterprises (Kubak, Bacik, & Nemec, 2013; Streimikiene & Alisauskaite-Seskiene, 2016) and majority of them are represented by family businesses.

Family businesses as a part of the small and medium-sized business sector represent a specific category of businesses and predominantly have a character of micro-enterprises or small businesses. Successful family businesses are also present in the medium-sized business category and some of them have become big companies. Compared to non-family businesses they face not only operational and financial problems, but specific problems as well. Most of the problems are due to overlapping family life of individuals with work.

In the first part of this paper we will focus our attention on describing characteristics and specifics of family businesses. Family-based business is already an established organizational form of enterprise in advanced market economies (Sueldo & Streimikiene (2016). The largest occurrence of these types of businesses can be found in the countries of Western and Southern Europe, such as Germany, France, Italy, Spain and Greece (Dalewski, 2015). Slovak Republic has all the prerequisites for family businesses to succeed.

According to Hudáková and coll. (2014) family businesses are not only a traditional form of entrepreneurship in developed economies, but in Slovak Republic as well. Together with sole proprietorship they represent a dynamic part of the business sector that can flexibly adapt to market requirements. The authors point out that one of the most striking problems (theoretically and also practically) is the absence of definition for family enterprises. The scientific literature provides several definitions, but no unitary definition exists to describe family enterprises. In his earlier work Mura (2013) points out the difficulties to provide definition for family enterprises due to inter-regional, cross-country comparison of results, entrepreneurial success and the tendency for development of this specific segment of small and medium-sized business

sector. In the category of large companies we can also find examples of long-established successful businesses, but their share is small compared to their presence in small and medium-sized business sector. On the basis of several approaches made by professional (Dalewski, 2015; Stražovská, L., 2015; Hudáková, Mižičková, Váľková, Mikoláš, & Fialová, 2014; Mura, 2013) and according to the research of Life Company in Massachusetts (in: Mura, 2013) we can speak about a family business if some of the following characteristics can be detected:

- the enterprise is in exclusive ownership of the family,
- the enterprise is more than half the family ownership,
- family members are involved in managing the business,
- there is an effort to transfer the business to the next generation,
- business owners consider the enterprise to be a family business,
- other family member is also employed in the enterprise besides the owner.

It is important to emphasize that neither in Slovak Republic and the EU a uniform definition can be provided for family business. An important issue of family business is the overlapping of family life and business. It means that family members spend time together in family and work environment as well. The responsibilities and social roles of fathers, mothers and siblings are blended. To distinguish the tasks as family members and work related issues, communication between family members is required to create a favourable atmosphere. A critical point in this area is the transfer of knowledge from one generation to the next, intergenerational exchange and transfer of knowledge (Bencsik, Juhász, Machová, & Toth, 2015). Lisková, & Tomšík (2013) focused their attention on division of competences and delegation of tasks. In family businesses it is necessary to adapt the management of human resources to specifics that exist in a given type of enterprise. Within a family not only family roles are shared, but work issues as well. Emphasis should shift on the expertise, skills and knowledge of the specific field, which should be effectively ensured by a family member. According to Bačík, Mihál & Fedorka (2015) the choice of communication tools, inside and outside the company must be well considered. When communicating with the external environment, the problem of choosing the right media (Solík, Visnovsky, & Lalahova, 2013) and determining a family member who is responsible for this should be considered. Following the current trends, we cannot forget about the fact that family businesses increasingly join the concept of social responsibility and direct their business activities to respect the principles of business ethics and development of economic, social and environmental awareness (Ubrežiová, Moravčíková, & Kozáková, (2016).

According to the ideas outlined above, the problems of family businesses derive from specific conditions of family businesses. Family businesses employ not only family members, but other non-family members as well, with whom it is desirable to create a harmonious atmosphere to succeed and achieve corporate goals. Specific challenges include: achieving work-life balance, adapting to market conditions, respect family interests, appropriate allocation of tasks and competences, fair remuneration depending on the quality of work done, maintaining objectivity in making decision about further direction of the business and much more.

2. Data and Methods

The solution to this issue is related to the sector of small and medium-sized enterprises with a specific focus on family businesses. This is an increasingly important field that deserves more attention from experts. The aim of this paper is to highlight the importance and status of family businesses, as well as to clarify the current situation in the field of family businesses in Slovak Republic. In this paper we also point to some specific characteristics of family businesses in

comparison with non-family businesses. In the final part, besides our findings, we also provide recommendations and suggestions for further development in business practice. We used data of research projects implemented earlier, particularly the data of the following projects: VEGA 1/0381/13, VEGA 1/0185/15 a KEGA 001UCM-4/2016. Descriptive statistics and logico-cognitive methods were applied to process the data.

3. Results and Discussion

There is no fixed definition what is considered to be a family business, but they are considered to be a part of the small and medium-sized business sector. When evaluating family businesses, it is necessary to rely on a valid categorization of business entities made by the EU. This legislative amendment has also been approximated into the national law of the Slovak Republic.

Table 1: Categorization of enterprises

Category	Number of employees	Turnover	Total assets
Microenterprise	0 - 9	< 2 mil. €	< 2 mil. €
Small enterprise	10 - 49	< 10 mil. €	< 10 mil. €
Medium enterprise	50 - 249	< 50 mil. €	< 43 mil. €

Source: Reference of EC No. 2003/361/EC, own processing

Based on this categorization it can be declared, that most of the family businesses fall into the category of micro-enterprises for different reasons. The most frequent reason is the employment of close family members. Employing a third party is rare. These businesses do not exceed the annual turnover of 2 million €. According to our research findings most of these family micro-enterprises have a character of start-up businesses, where a good idea contributed to achieve success on the market. The statement that most of the family businesses fall into the category of micro-enterprises is also proved by a fact, that the sole owner of this type of business is the family.

Based on our findings and the legislation we strongly support a clear and unified definition of what falls into the category of family business. That would help to remove the inconsistency of perception of these types of businesses in the national economies of different countries. Nowadays it is very difficult, practically impossible to make an objective comparison of family businesses in different countries at the same time.

For objective assessment of the current situation in the SME sector, we provide an overview of business entities considering the character and size of the business by the end of 2015. The situation is illustrated in Table 2.

Table 2: Categorization of enterprises based on size and character of business activity

Category	Number of enterprises	Self-entrepreneurs	Self-employed farmers	Liberal professions
Microenterprise	178 095	315 182	4 302	17 657
Small enterprise	11 721	1 215	9	39
Medium enterprise	2 780	63	0	0

TOTAL

192 596

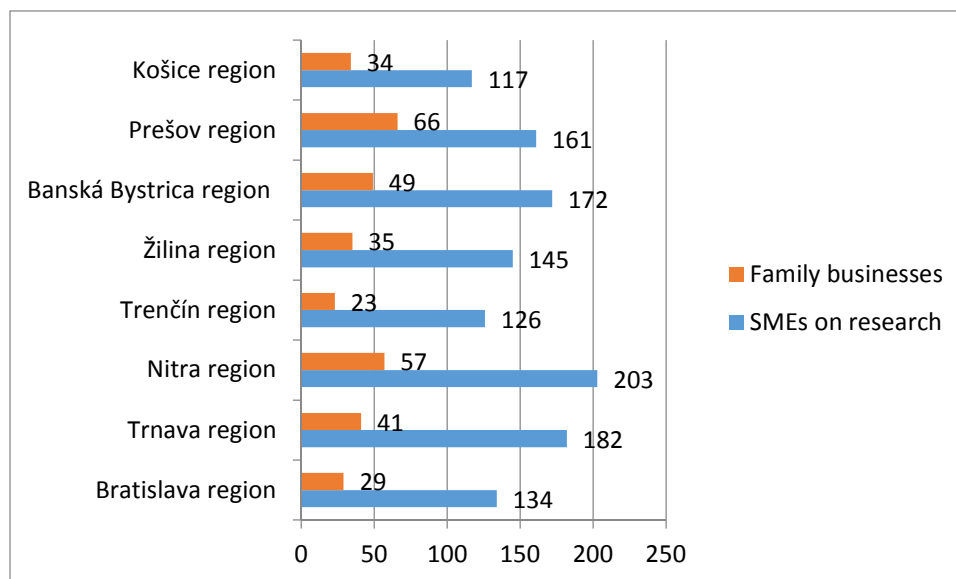
316 460

4 311

17 696

Source: Statistical Office of SR, own processing

According to data above, the biggest group of business entities in Slovak Republic is represented by micro-enterprises. They account for 92,5% share of the market. A distinctive character of entrepreneurship is determined according to the Act no 455/1991 Coll. on Trade Licensing about self-entrepreneurship.

Figure 1: SMEs on research and family businesses

Source: own research and processing

The significant problem in assessing the business sector is the quantification of the category of family businesses. Since a precise definition of a family business does not exist and there is no uniform categorization, we encounter a problem of quantifying the number and nature of these businesses. It can be assumed that micro-enterprises are dominated by size and sole traders dominate based on the character of the business. According to our empirical findings during the implementation of research projects focused on the assessment of the business sector, the occurrence of family businesses ranges from 18% to 41% in different regions of Slovak Republic. Figure 1 illustrates the number of family businesses in a selected statistical file. 334 out of the total number of 1240 businesses from different parts of Slovak Republic are family businesses, which accounts for 26,9%. The ratio of family businesses is different in different regions of Slovak Republic. Most of the family-owned enterprises involved in the research were from Prešov region, where their share reached 41%. The smallest representation of family businesses with 18,3% was registered in Trenčín region. According to our findings, family businesses are mainly represented in agro-food sector, tourism and services.

While conducting our research we had an interest in characteristic features these types of businesses have and different stages of life cycle we can identify regarding family businesses. Family businesses are mainly founded by spouses. Such an enterprise is usually referred to as an enterprise of spouses (manželský podnik). A characteristic feature of these types of businesses is the employment of both spouses, where roles in family and business are mixed. In these cases the management theory describes two activities: one of the spouses is the director, while the other will focus on operational activities of the business. The main objective to

establish a family business is a possibility of self-employment and self-realization. This type of business compared to non-family businesses is demanding for mental and social maturity as life partners spend almost 24 hours together and it is very difficult to separate the family life and work issues. This often generates disputes and conflicts.

The opposite example is represented by those family businesses, where the current generation is interested in passing on the business to the next generation and the main reason to continue the activity is the succession. In this type of business, a parent (father) who has an interest in passing on the business activity to a new generation has a key position. The biggest problem is the unwillingness of the new generation to continue the activity or any other business activity. Disinterest of the new generation to continue the business is often connected with the sector the business operates in. Typical examples are agriculture, food processing, which are characterized by physically demanding work with low appreciation and low margin. Other typical sectors are services, mainly craftsman services, hospitality, where demanding physical work is exceeding the reward the job can provide.

In the last part of this paper, we present the characteristics of family businesses compared to non-family businesses (Table 3). Sign “+” indicates characteristics typical for the type of business. Significance is indicated on a scale ranging from 1 to 5, where the highest level of significance equals to 5.

Table 3: Specifics of family businesses compared to non-family businesses

Category	Family business	Non-family business
Acceptance of members	+++++	++
Emotional bond	+++++	+
Internal orientation	++++	+
External orientation	++	+++++
Customer orientation	++++	+++
Work-life balance	++++	++

Source: Mura (2013), own processing

Table 3 clearly shows that a specific feature of family businesses is a need to maintain work-life balance as contact with family members is unavoidable at home and the workplace as well. Emotional bond between family members working together in family business is stronger than the emotional bond between employees of non-family businesses. Family members are accepted as entrepreneurs. The family business compared to non-family business is significantly oriented inward. Customer orientation is almost identical with a difference that family businesses have the family name included in the name of the company. In case of failure, the reputation of name and the family will suffer.

4. Conclusion

Family business is an important form of entrepreneurship in small and medium-sized business sector. During more than 25 years of existence of market economy in Slovak Republic, family businesses have gained a lot of experience, many of them have successfully joined other business entities and some of them nowadays operate as big companies. Family businesses are also engaged in international business and have gradually reflected on the globalization of the economy and internationalization of entrepreneurial activity, thus expanding their activity in domestic and international business environment as well. Increased attention should be paid on

the businesses sector, business environment and especially family businesses, because they provide job opportunities not only for family members, contribute to regional development, bring innovation and they are engaged in transfer of knowledge into practice.

The persistent problem theoretically and practically is the absence of a comprehensive definition of the family enterprise, the absence of specific legal framework for these types of businesses, consideration of characteristics of family businesses and reflecting on these characteristics from macroeconomic, political and legal perspectives. The practical problem faced by Slovak family businesses is the problem of generational exchange, ensuring continuity of the business, maintaining the quality of products and services provided, investing in further development and so on. It would be necessary to adopt a legislative framework that would make it possible to involve flexibly more family members, without having to enter employment relationship. The submitted paper emphasizes the importance and status of family businesses in Slovak Republic and points out the most common obstacles these types of business face.

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Management Audit as a Tool for Managing Small and Medium-Sized Enterprises

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Abstract

This paper discusses management audit, particularly fulfilment of its objective, which is an analysis of the current state of managing a business enterprise. The aim is to propose and develop a "7S Evaluation Model" as a tool used to evaluate the current state of enterprise management. In order to create the model, personal and written structured interviews with selected audit experts as well as questionnaire surveys among managers of enterprises were used, specifically focusing on management audit. The main objective of the research was to obtain comprehensive information about the possibilities of using management audit in practice as a tool for managing small and medium enterprises in the Czech Republic, and, based on the information obtained, to propose an efficient evaluation model. The advantage of the proposed model is a more detailed analysis of the enterprise management system as a whole in comparison with the methods and techniques used to date. Managers can use the developed model within their enterprises without any changes and / or adjust it, or modify the model according to their specific needs and requirements.

This is a sample of the format of your full paper in the conference proceedings. Use single space. Arrange the text in one column. Use 11pt size Times New Roman throughout the paper except for the headlines and abstract. The abstract should summarize the contents of the paper and should contain 8-12 lines or 150-205 words, Times New Roman 11pt, Italic, block-aligned. The length of the article is 6 to 10 pages.

Keywords: Management Audit, Small and Medium-Sized Enterprises, 7S Evaluation Model

JEL Classification: M 14, M 21, M 29

1. Introduction

The main goal and effort of every business enterprise is a permanent improvement of its management system, which specifically involves conducting certain analyses and recognizing the current state of the enterprise management system, evaluating its strengths and / or weaknesses and developing particular proposal(s) for its improvement(s), or introducing a new system. However, in order to be able to do so, the enterprise management must process and evaluate management audit, whose main focus is the analysis and evaluation of the management system.

1.1 Management Audit

Management audit as such has been defined by many authors. The basic definition was compiled by Law (2009), who states that it is an independent review of managing a company, performed by professional management consultants specializing solely in this type of review.

Also, it may be argued that management audit is seen as a special type of enterprise management support, but not as a controlling body merely searching for mistakes and shortcomings. Thus, management audit serves managers or management of enterprises as a management tool, since it is supposed to provide impartial information about management systems used in the given enterprises. (Spencer, 2011)

However, all activities in the management audit implementation must be performed by specialized, qualified and skilled personnel, who are not only required to know the theory and

principles of enterprise planning, organization and management, but they must also have adequate knowledge of business practices. (Kotler a Keller, 2013)

Moreover, an important as well as typical characteristic of management audit is that, in comparison with other audits, it does not have any fixed and binding audit procedures, methods, techniques or standards the auditor should follow when performing such audit. On the contrary, management audit largely has a certain creative form. (Kumar a Sharma, 2015)

1.2 Objective of Management Audit and Evaluation Methods

According to Truneček (2004), the sole objective of management audit is to determine and evaluate the current state of enterprise management system, which means to identify and characterize particular problem area(s) in the given enterprise preventing it from its effective management.

Additionally, to evaluate the current state of management, the following variety of possible management tools and methods may be used, e.g. internal benchmarking, internal controlling, balanced scorecard, Strategic Position and Action Evaluation (SPACE) analysis, Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis, process analysis, etc. (Bose, 2012)

According to the recommendations by Analoui, Karami (2003) and Truneček (2004), to analyze and evaluate the current state of managing any enterprise, it is appropriate to use an analysis of the key factors emanating from the 7S Model, developed at McKinsey & Co. consulting firm in the early 1980s. The model analyzes the main components that are mutually conditioning, influencing and, in their totality, deciding whether effective enterprise management will be ensured. Apparently, it is only ensured by mutual harmonization of the following seven factors: structure, systems, style, staff, skills, strategy and shared values.

Other authors, such as Wheelen, Hunger (2012), Hood (2013) and Robbins, Coulter, DeCenzo (2017), advise to use the well-known and widely used SWOT analysis, while David (2011) and Bhandari (2013) suggest using a more detailed analysis based on the SWOT analysis, i.e. Internal Factor Evaluation (IFE) Matrix.

Still, most of the Czech and foreign authors, including the above mentioned, refer to the same opinion, which is related to using an appropriate simultaneous combination of multiple analyses, thus eliminating the disadvantages of each analysis.

2. Data and Methods

This paper aims to propose and develop a model, described here as "7S Evaluation Model", consisting of "Two-Stage 7S Adaptation Model" and serving as a tool used to evaluate the current state of managing a business enterprise. In order to create the model, personal and written structured interviews with selected audit experts as well as questionnaire surveys among managers of several enterprises were used, specifically focusing on management audit. The main objective of the research was to obtain comprehensive information about the possibilities of using management audit in practice as a tool for managing small and medium enterprises in the Czech Republic, and, based on the information obtained, to propose a likely efficient evaluation model (i.e. the above mentioned) used to evaluate the state of selected enterprise management. The research was conducted in the Czech Republic in 2015-2016 and focused on small and medium-sized enterprises, i.e. enterprises with 11 to 250 employees. Of the possible internal analyses, which may be used in management audit processing, the research respondents most frequently picked out 7S Model analysis, Internal Factor Evaluation (IFE) Matrix and SWOT analysis, as the most suitable methods to evaluate the current state of enterprise management. The major advantage of the proposed "7S Evaluation Model" is a more detailed

analysis of (a chosen) enterprise management system as a whole in comparison with the methods and techniques used to date.

3. Results and Discussion

Development of “7S Evaluation Model“

Considering the most frequently picked out methods mentioned above, the 7S Model analysis was selected as the basis for developing the proposed evaluation model of the current state of management. The reason for its selection resides not only in the fact that the Model is one of the main tools for internal enterprise analysis (and hence serves to identify the strengths and / or the weaknesses in management), but it simultaneously analyses the influence of all the most important elements in enterprise management as well.

Correlatively, Table 1 below shows the previously mentioned "7S Adaptation Model", which, based on the original 7S Model, includes the following factors (to be analysed): structure, systems, management style, staff, skills, strategy and shared values. Moreover, application of the "7S Adaptation Model" individually focuses on each of the factors, while, at the same time, putting emphasis on their mutual consistency and harmony. Afterwards, particular evaluation indicators are assigned to the individual factors and certain evaluation parameters are determined.

To be more specific, the evaluation indicators were assigned as results of the research conducted among certain respondents, who were asked to assign the maximum of four evaluation indicators to each of the factors. Additionally, various (evaluation) questions were compiled in relation to another set of research results obtained from the interviewed managers in selected enterprises. Here, effectiveness and efficiency were presented as the evaluation parameters – according to a popular "philosopher of management", Peter Drucker, who in his book, *Management: tasks, responsibilities, practices* (from 1974), states that any management activity should be assessed with regards to those two aspects (parameters). Also, he asserts that effectiveness means doing the right things, whereas efficiency is about doing things right, i.e. the right way.

Table 1: 7S Adaption Model

Factors	Evaluation Indicators	Evaluation Parameters		Overall Evaluation	
		A. Effectiveness (max. 5 pts)	B. Efficiency (max. 5 pts)	A.	B.
		0 – 5	0 – 5	0-5	0-5
Structure	Flexibility; Centralization – Decentralization of powers; Levels and span of management; Corporate bonding and relationships	Tally of points from evaluation questions – Structure	Tally of points from evaluation questions – Structure	Σ	Σ
Systems	Communication system; System of using company (enterprise) resources; System of used management methods and techniques; System of adaptation to corporate environment	Tally of points from evaluation questions – Systems	Tally of points from evaluation questions – Systems	Σ	Σ

Management style	Suitability; Flexibility; Specification of managerial responsibilities; Use of managerial power	Tally of points from evaluation questions – Management style	Tally of points from evaluation questions – Management style	Σ	Σ
Staff	Staff qualifications and training; Work environment and workplace relationships; Motivation and stimulation of employees; Employee evaluation and rewarding	Tally of points from evaluation questions – Staff	Tally of points from evaluation questions – Staff	Σ	Σ
Skills	Planning skills; Organizational skills; Management skills; Controlling skills	Tally of points from evaluation questions – Skills	Tally of points from evaluation questions – Skills	Σ	Σ
Strategy	Suitability; Comprehensibility and unambiguity; Acceptability and feasibility; Development divided into short-term procedures	Tally of points from evaluation questions – Strategy	Tally of points from evaluation questions – Strategy	Σ	Σ
Shared values	Goals; Vision; Mission; Tasks	Tally of points from evaluation questions – Shared values	Tally of points from evaluation questions – Shared values	Σ	Σ

Source: Authors' compilation

Subsequently, the evaluation questions (stated in the following table, i.e. Table 2) were compiled for each of the factors in order to correspond to the factors' evaluation indicators. The number of questions selected and assigned to each factor is five so that the maximum point value (i.e. 5) was delivered.

Table 2: Evaluation of Scoring Scale

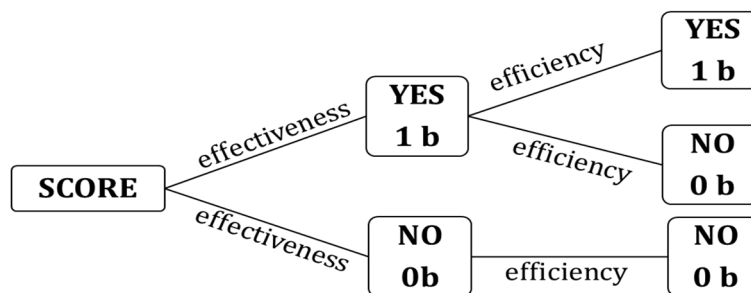
Factors	Evaluation Questions
Structure	Is the organizational structure of an enterprise flexible? Does the number of management levels correspond to the specifics of the enterprise? Are the superior-subordinate relationships in the enterprise clearly defined? Is (Are) the set degree(s) of centralization / decentralization of powers to subordinates sufficient? Is the number of subordinates to individual managers optimal, i.e. is the span of management in the enterprise appropriately used?
Systems	Are suitable communication methods and techniques used in the enterprise? Does the enterprise use an optimal combination of its resources? Are appropriate and modern management methods and techniques used in the enterprise? Is the enterprise able to correctly respond to the changes in its corporate environment? Are appropriate information systems used in the enterprise?
Management Style	Do managers use an adequate style of managing their subordinates in the enterprise? Do managers adapt the style of enterprise management according to the current situation in the enterprise? Are the responsibilities of managers and their subordinates in the enterprise clearly defined? Do managers use the possibility of delegation of powers to

	their subordinates, or is there abuse of their power over subordinates? Is teamwork used?
Staff	Does the enterprise have an optimal (sufficient) number of employees? Are the employee qualifications adequate for carrying out the job responsibilities? Do employees have any opportunities for career growth and progression? Are the job descriptions of individual employees, including their responsibilities, defined? Do managers use appropriate style(s) and method(s) of motivation and evaluation of their subordinates?
Skills	Are managers at all hierarchical levels able to independently plan, organize, manage and control? Are managers at all hierarchical levels able to compile plans so that these can complement and follow one another? Are managers and their subordinates able to use a self-management method? Do managers at all hierarchical levels use a management control system and a feedback control? Are the skills of managers and their subordinates sufficient for their job performance?
Strategy	Has the enterprise appropriately and clearly articulated its strategy? Is the enterprise strategy sufficiently and appropriately developed (divided) into short-term procedures and activities (operations)? Has the enterprise developed any concept of how to best meet the articulated strategy and implement it? Has the enterprise adequately formulated and established its business goals and developed any concept of how to best achieve them? Are the goals, visions and strategies realistic and feasible?
Shared values	Are managers and their subordinates familiar enough with the enterprise policy, goals, vision, mission, tasks and strategy? Are managers and their subordinates sufficiently and informed in good time about the enterprise affairs and actions? Do managers and their subordinates act in accordance with the established goals and values of the enterprise? Are the competences of all enterprise employees clearly defined and are employees mutually aware of them? Has the enterprise formed its corporate culture that all employees are familiar with?

Source: Authors' compilation

Next, the main principle of the required evaluation, based on the above model in Table 1, consists in evaluating answers to the assigned questions (stated in Table 2) in terms of effectiveness and efficiency. In addition, the questions were intentionally constructed so that the answer could be "Yes" or "No", and to put this into perspective, the related evaluation system is included in the following model (figure), i.e. Figure 1.

Figure 1: Evaluation System



Source: Authors' compilation

In order to elucidate the system illustrated above, its evaluation stages are as follows:

- 1) Asking the evaluation questions about each of the factors, as stated in Table 2.
- 2) Obtaining answers to the given questions – first, in terms of effectiveness, which stands for doing the right things:

- a. a negative answer to any of the questions (in terms of effectiveness) is evaluated with 0 points, and indeed represents a negative answer to the question in terms of efficiency, i.e. scoring 0 points as well (obviously, when one does not do or develop that particular activity in the enterprise, it cannot be further evaluated).
 - b. a positive answer to any of the questions (in terms of effectiveness) is evaluated with 1 point, i.e. the enterprise performs such activity. It may then be proceeded to evaluating the answer in terms of efficiency.
- 3) Obtaining answers to the given questions in terms of efficiency – this indicates whether the enterprise activities are being performed right, i.e. the right way.
- a. a negative answer to any of the questions (in terms of efficiency) is evaluated with 0 points, i.e. although the enterprise does perform the activity, it is performed inefficiently.
 - b. a positive answer to any of questions (in terms of efficiency) is evaluated with 1 point – it supports the fact the activity is performed efficiently.
- 4) Overall evaluation is a mere addition of points, where 10 is the number of maximum possible points achieved for each evaluated factor, with the accurate scoring scale demonstrated in Table 3.

(Note: To make quantification of the obtained answers easier, the evaluation questions for evaluating effectiveness and efficiency are identical.)

Table 3: Scoring Scales of Evaluation Factors

<i>Overall Final Evaluation of 7S Adaptation Model</i>	<i>Description of Evaluation</i>	<i>Overall Point Evaluation of Individual Factors</i>	<i>Overall Point Evaluation of 7S Adaptation Model</i>
<i>A</i>	<i>High degree of effectiveness and efficiency</i>	$\sum 10 - 9 b$	$(10 - 9 b) * 7$
<i>B</i>	<i>Fair degree of effectiveness and efficiency</i>	$\sum 8 - 7 b$	$(8 - 7 b) * 7$
<i>C</i>	<i>Average (Partial) degree effectiveness and efficiency</i>	$\sum 6 - 5 b$	$(6 - 5 b) * 7$
<i>D</i>	<i>Low degree of effectiveness and efficiency</i>	$\sum 4 - 1 b$	$(4 - 1 b) * 7$
<i>F</i>	<i>Zero degree of effectiveness and efficiency</i>	$\sum 0 b$	<i>0</i>

Source: Authors' compilation

As may be seen in Table 3, there are specific scoring scales of evaluation factors involving overall evaluation of the current state of particular enterprise management, based on processing and point evaluation of answers to the previously compiled questions. The scale applied for the evaluation parameters of the individual evaluation factors was selected in accordance with a Likert scale, specifically the five-point scale (similar to the one used in education, i.e. "A" represents the best possible evaluation, whilst "E" represents the worst possible evaluation).

Thus, the overall evaluation comprises of adding the overall point evaluation of the individual evaluation factors. The best possible overall result is "A", i.e. 70-63 points, indicating that such enterprise is managed correctly and the followed management system is highly developed. On the other hand, the worst possible overall result is "E", i.e. 0 points – this indicates a very poor and inappropriately selected enterprise management system.

For a more detailed evaluation, the first "7S Adaptation Model" is followed by the second model, i.e. "Application IFE - 7S Matrix", which further uses the opportunity to evaluate the factors and / or their indicators in terms of internal stability in managing the particular enterprise as a whole. Essentially, the reason for combining the 7S Model with the IFE matrix is that the factors emanating from the 7S Model are evaluated individually, while, at the same time, their mutual consistency and harmony are emphasized, and the principle of developing the "Application IFE - 7S Matrix" is based on the IFE Matrix development principle. However, there are already predetermined evaluation factors of the matrix, or their indicators. (Here, every manager or auditor may choose whether – for preparation of the "Application IFE - 7S Matrix" – he / she merely uses the seven basic factors of the original 7S Model, or uses a choice of the predetermined evaluation indicators based on the "7S Adaptation Model".)

On the whole, the presented "Application IFE - 7S Matrix" model is focused on evaluation of the assigned evaluation indicators of individual factors and the model processing principle corresponds with the principle of the original IFE matrix processing. Furthermore, the significance values can be determined from 0.00 (low significance) to 1.00 (high significance), but the total addition of values must equal to exactly 1.00. The point values may be from 1 to 4, wherein 1 (significant) and 2 (insignificant) indicate the weaknesses in the evaluated enterprise management, but 3 (insignificant) and 4 (significant) indicate its strengths. Then, the overall evaluation is a mere multiplication of the significance values and the point values, and will determine whether the given enterprise is managed effectively (provided that the overall evaluation nears or equals 4) or not (if the overall evaluation nears or equals 1).

Table 4: Application IFE - 7S Matrix

Factors <i>Evaluation indicators</i>	Significance Value	Point Value	Overall Evaluation
Structure <i>Flexibility, Centralization / Decentralization of powers, Levels and span of management, Corporate bonding and relationships</i>			
Evaluation of Factor - Structure	Evaluation of Category – Strengths / Weaknesses		
Systems <i>Communication system, System of using company (enterprise) resources, System of used management methods and techniques, System of adaptation to corporate environment</i>			
Evaluation of Factor - Systems	Evaluation of Category – Strengths / Weaknesses		
Management style <i>Suitability, Flexibility, Specification of managerial responsibilities, Use of managerial power</i>			
Evaluation of Factor – Management style	Evaluation of Category – Strengths / Weaknesses		
Staff <i>Staff qualifications and training, Work environment and workplace relationships,</i>			

Motivation and stimulation of employees, Employee evaluation and rewarding			
Evaluation of Factor - Staff	Evaluation of Category – Strengths / Weaknesses		
Skills			
Planning skills, Organizational skills, Management skills, Controlling skills			
Evaluation of Factor - Skills	Evaluation of Category – Strengths / Weaknesses		
Strategy			
Suitability, Comprehensibility and unambiguity, Acceptability and feasibility, Development divided into short-term procedures			
Evaluation of Factor - Strategy	Evaluation of Category – Strengths / Weaknesses		
Shared Values			
Goals, Vision, Mission, Tasks			
Evaluation of Factor – Shared Values	Evaluation of Category – Strengths / Weaknesses		
Overall Evaluation of IFE MATRIX			
Strengths	0,00 - 1,00	3 - 4	Significance v. x Point v.
Weaknesses	0,00 - 1,00	1 - 2	Significance v. x Point v.
Overall Evaluation of IFE MATRIX (average evaluation)	1,00	--	1,00 - 4,00 2,50

Source: Authors' compilation

To facilitate evaluation of the individual evaluation factors with certain significance values, the addressed managers (involved in the research) were recommended to make use of four (or five as the maximum number of) values. Upon the authors' mutual agreement, the evaluation values were divided into five categories (according to the degree of importance, or significance, for the given enterprise), i.e. very low, low, medium, high and very high degree, with the particular evaluations shown in the following table, i.e. Table 5. (Here, the significance values for each category were assigned conforming to summarization of the research proposals from both the managers and the auditors.)

Table 5: Determination of Evaluation Values for Evaluation Indicators

Value Category	Significance Value	Explanatory Notes
Very low degree of significance	0,01	Evaluation for indicator with <i>a very low significance</i> in terms of efficient enterprise management
Low degree of significance	0,025	Evaluation for indicator with <i>a low significance</i> in terms of efficient enterprise management

Medium degree of significance	0,05	Evaluation for indicator with <i>a medium significance</i> in terms of efficient enterprise management
High degree of significance	0,075	Evaluation for indicator with <i>a high significance</i> in terms of efficient enterprise management
Very high degree of significance	0,09	Evaluation for indicator with <i>a very high significance</i> in terms of efficient enterprise management – i.e. with a major impact on successful enterprise management

Source: Authors' compilation

The above table shows assignment of the significance values to the determined (28) evaluation indicators. Indeed, determining the significance values may be always adjusted according to the requirements of each manager or auditor. To facilitate quantification, it is advisable, however, to adhere to the recommendations and maintain the scoring scale on the borderline of four up to the maximum of five levels.

Finally, combination of both of the above separate models will result in development of the so-called "Two-Stage 7S Adaption Model". The first ("7S Adaptation Model") will determine which of the categories is overall used most effectively and efficiently regarding evaluation of the assigned evaluation indicators. And when applying this model, managers or auditors may identify certain strengths in terms of managing the given enterprise and also determine some weaknesses. However, to be able to assess whether the strengths prevail over the weaknesses, or vice versa, a particular proposal (and recommendation) was put forward, i.e. to proceed to preparation of the second model - "Application IFE - 7S Matrix", whose purpose is to evaluate the internal stability in efficient enterprise management.

4. Conclusion

To evaluate the current state of managing a business enterprise, it is possible to apply a number of already known and used management methods, techniques and analyses. However, the paper presents managers of enterprises with a completely new and more detailed "Two-Stage 7S Evaluation Model" to be used to evaluate the current state of enterprise management. The advantage of the proposed model is an in-depth compilation of particular evaluation factors, indicators as well as evaluation questions that managers (and auditors) can use without having to be held up with their formulations.

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Family Businesses in selected regions of Slovakia

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Abstract

Running a family business in Slovakia does not have a long tradition compared to advanced market economies of the EU member states and developed economies in wider context. Restarting this form of entrepreneurial activity allowed the introduction of private ownership after the political-economic changes 26 years ago. Family businesses are an important component of the SME sector and therefore deserve special interest in research. The subject of this paper is to evaluate the activity of these businesses in selected self-governing regions of Slovakia in order to present some areas of business development in these enterprises. When examining the problem areas, we rely on the results of primary research based on interviews conducted during the research project of the Faculty of Economics and Business of the PEVŠ in Bratislava. In conclusion chapter of this paper we formulate recommendations for business practice.

Keywords: *small business, small and medium enterprises sector, family business, self-governing regions*

JEL Classification: *L26, M13, M20*

1. Introduction

As we consider the history of economy, family businesses can be declared the oldest form of private entrepreneurship. These businesses have developed naturally, parallel to the economic systems in individual countries of the world. In countries with long established history of market economy, family businesses are the basic pillar of the economy. In those countries where the market economy was suppressed and established a planned economy, this form of entrepreneurial activity is less known and less developed

Slovakia, following the political and economic change in 1989, entered the era of market economy and gradually underwent restructuring and reshaping of the economy. Small and medium-sized enterprises, including many micro-enterprises have emerged after large enterprises. In the restitution process the property was requested back by families and as a result of that, most of the property requested was returned to family ownership. Those entities that faced new challenges and adapted to market conditions and customer needs ranked among the successful ones.

Hudáková et al. (2014) state, that family businesses have a smaller representation in Slovakia compared to developed Western European economies. Family businesses are still very young, according to these authors and there is no data available on the percentage of small and medium-sized businesses in family ownership.

An objective prerequisite of establishing and developing family businesses is the interest of family members to realize their own ideas, says Banno & Sgobbi (2017). An enterprise may be considered a family business if it is in the family ownership, family members are involved in the management process and there is an effort to transfer a business to a new generation in the

family. Sometimes not all the characteristics mentioned are present and controversial situations arise when classifying these businesses.

Business entities are increasingly involved in various business and other relationships, where management of the business faces a decision whether to take a business risk, enter a little-known market or other sector of business activity. The improvement of business processes can be achieved by applying quantitative methods in managerial decision-making, thus contributing to managerial success according to Hajdu, Andrejkovič & Mura. Other authors, Bačík & Pudlo (2015) see opportunity to improve managerial processes by other management methods and techniques.

In the SME sector family businesses are those, which are increasingly sensitive to changes. Success and efficiency of small and medium-sized enterprises was monitored by Volek & Novotná (2014), Mura & Sleziak (2015). They note that the subcategory of micro-enterprises is one of the most sensitively responding sector and they are daily confronted with various level and character of risk. The biggest challenge for start-ups is financing their business activities, as their viability is not a guarantee for banking houses. Further problems of these businesses are the currency and exchange rate risk, solvency, etc., mentioned by Musa, Strokova, & Musova, Z. (2016). Special attention to risk factors faced by businesses is emphasized by Havko, Klucka, & Haviernikova, K. (2016). They highlighted the risk factors of network businesses in their research. Family businesses are often involved in a variety of business networks that enable them to strengthen and improve their market position in line with the globalization trend, providing them possibility to penetrate new markets (Mikalauskiene, Štreimikiene, & Mulagalejeva, 2016).

Family businesses play an important role and have an important position in agro-sector. They are directly linked to individual regions and contribute to their development, not only through their economic activity, but also by employing population living in rural areas, producing products, contributing to local budgets etc. According to Markovičová (2014) and Korcsmáros (2012) we cannot doubt the importance of these forms of small and medium-sized enterprises. Kordoš (2016) adds that regional development is directly dependent on knowledge creation, primarily connected with small and medium-sized enterprises. Similar opinion is shared by Bencsik, Juhász, Machová, & Tóth (2015), who emphasize the importance of human capital in the company as a source of knowledge that contributes to business development. In family businesses, both mother and father have parental and entrepreneurial roles. To combine these two social roles requires a high level of commitment, a socially and mentally mature personality.

The small and medium-sized business sector, including family businesses deserve a special attention from professionals, as these businesses form the backbone of the Slovak economy (Tóth & Mura, 2014). They also contribute to employment in those regions where there are no medium-sized or large enterprises or do business in a sector of the national economy, which for different reasons are not interesting for other categories of businesses. To develop business activities, family members are looking for suitable candidates and colleagues to be employed in family businesses. Based on the survey, they often address former colleagues, because they are familiar with the quality of their work and expect interest and loyalty from them. From the point of view of human resources management, it is necessary to deal with the issue of motivation to contribute to effective performance, ensuring the development of human capital and other aspects, as it is mentioned by Vlacseková & Mura (2017). Appropriately chosen tools actively contribute to team creation, which is an asset of the company. The management of

family businesses also needs to think about creating a suitable business climate and taking steps to shape a good corporate culture, says Sueldo & Streimikiene (2016).

Family businesses conducting an entrepreneurial activity based on these principles also accept the concept of social responsibility, which they have interest to deepen as well (Križanová, & Gajanová, 2016). It can be forecasted that the importance of corporate social responsibility will increase in the forthcoming period and business partners, customers and the general public will also be interested in working with those businesses whose activities are in accordance with a socially responsible entrepreneurship. According to Zaušková, Madleňák & Švec (2013) implementation of this concept has no roots only in ethics but its basic principles can be recognized in legal norms. The concept of CSR is no more a privilege of large companies, because it is similarly implemented by business of small and medium-sized company sector, including family businesses.

2. Data and Methods

In this paper, we focus our attention on family businesses that is a part of small and medium-sized business sector. This sphere of economic entities has not received sufficient attention so far, although it is an integral part of the private sector. We are trying not only to highlight the importance of this type of entrepreneurship, but also present some areas of development of these businesses.

The following theoretical – methodological approaches were applied to solve the issue:

- search for literary sources,
- selection of literary sources,
- processing literary sources,
- obtaining primary data,
- conducting interviews with the respondents,
- evaluation of primary data,
- verbal and graphical presentation of results.

While collecting data on terrain, we participated on solution of the research project of the Faculty of Economics and Business of PVEŠ in Bratislava. We conducted interviews with representatives of family businesses in selected regions of Slovakia, self-governing regions of Bratislava and Trenčín. In conclusion part of this paper we have tried to formulate recommendations for business practice.

3. Results and Discussion

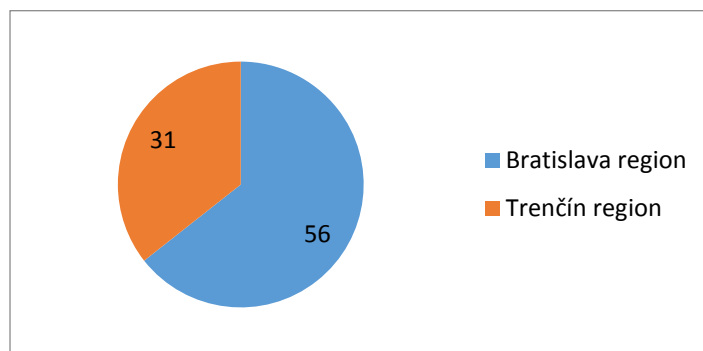
This chapter will focus on presentation of research findings. The research was conducted as a part of an extensive research at the Faculty of Economics and Business of the Pan-European University in Bratislava. Terrain data was obtained with a help of a structured interview technique with representatives of business entities representing the family business sector.

Family businesses in our research can be characterized with the following features:

- an enterprise where decisive share of ownership is in hands of the family,
- an enterprise where the exclusive owner is a family member,
- an enterprise where family members are involved in management,
- an enterprise where the transfer of knowledge and experience to the next generation of the family is present.

The structured interviews were conducted with representatives of family businesses from selected regions. The representatives of these companies were mainly the owners or top managers. 150 companies were addressed reporting the characteristics of family businesses. The interviews were successfully conducted in 87 companies. The categorization of enterprises participating in research is illustrated in Figure 1.

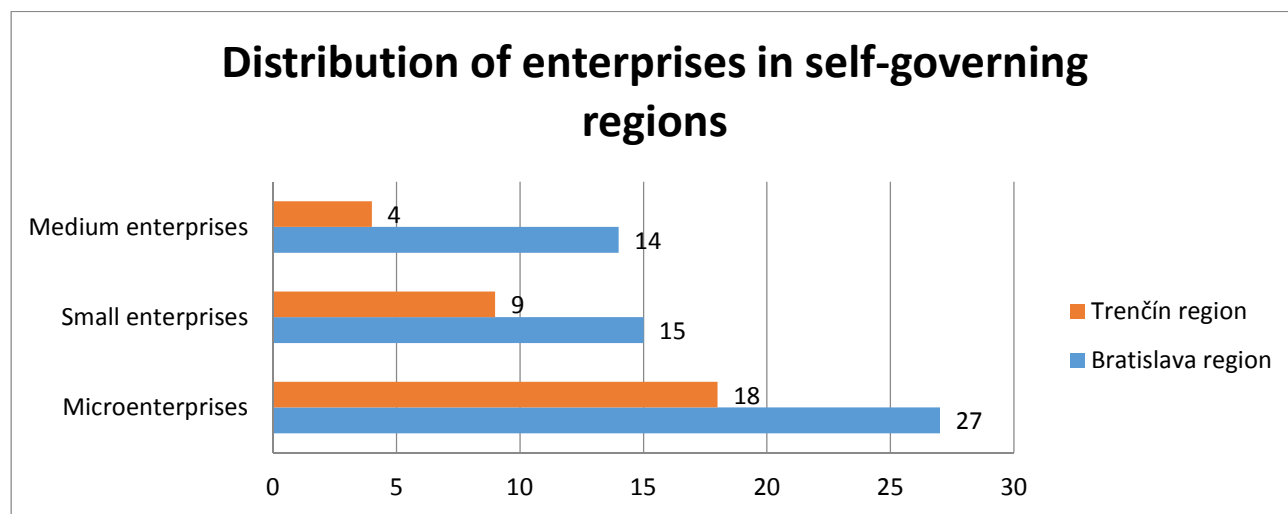
Figure 1: Family businesses on research



Source: own research and processing

As it is clearly illustrated in Figure 1, 56 family businesses participated in research from Bratislava self-governing region and 31 family businesses from self-governing region of Trenčín. The selection of counties was based on quota and corresponded with the affiliation of authors of this paper.

Figure 2: Distribution of enterprises in self-governing regions



Source: own research and processing

The following graph (Figure 2) illustrates the categorization of family businesses participating in our research based on the valid categorization of enterprises in SME sector.

In our structured interview we addressed several questions to our respondents. Because of limited content of this paper we will list the questions we required answer for:

- the size of the business (small, micro or medium-sized),
- the year of starting the business activity,
- the relative share of family in the business,
- which are the most significant problems in family business,

- the question of succession resp. how businesses plan to solve the problem of continuity of business.

Evaluation of achieved results in family business sector in self-governing regions of Bratislava and Trenčín:

1. the size of the business (micro, small or medium-sized enterprise)

In the survey of 56 family businesses in Bratislava region, 27 have a character of micro-enterprise, 15 businesses can be categorized as small enterprises and 14 of them fall into the category of medium-sized enterprises. This categorization is based on the EU legislative norms. It can be said that family businesses in Bratislava region are mainly small businesses only a quarter of them can be characterized as medium-sized. A macroeconomic outcome is confirmed, as most of the family businesses fall into the category of micro and small-sized enterprises.

In the survey of 31 family businesses in Trenčín region, 18 have a character of micro enterprises, 9 businesses can be categorized as small businesses and 4 of them fall into the category of medium-sized enterprises. This categorization is based on the EU legislative norms. It can be said that family businesses in Trenčín region are mainly micro, possibly are small enterprises and only less than 13% are medium-sized businesses. A macroeconomic outcome is confirmed again, as most of the family businesses are micro or small-sized enterprises.

2. the year of starting the business activity

We had an interest in the year of starting the business activity. The findings about analysed region are shown in Table 1.

Table 1: Starting a business

Year	Number of enterprises in TN region	Number of enterprises in BA region
1990 – 1991	4	6
1992 – 1993	2	10
1994 – 1995	6	7
1996 – 1997	4	8
1998 – 1999	2	3
2000 – 2001	2	4
2002 – 2003	0	3
2004 – 2005	3	2
2006 – 2007	5	3
2008 – 2009	2	2
2010 – 2011	0	1
2012 – 2013	0	4
2014 – 2015	1	2
2016 – 2017	0	1

Source: primary research, own processing

Table 1 indicates that most of the family businesses in the region were established in the early nineties of the previous century. The reason can be the transformation of the Slovak economy and the restitution process, providing the possibility for self-realization of citizens by starting a business activity that was impossible in the planned economy. By the 1990s of the previous century family businesses were established alike and later their establishment slowed down and was only gradual in the years to come. The global economic crisis has slowed down their development again.

3. the relative representation of family in the business

One of the conditions of family ownership of the business is the family representation in the business as a whole. Based on our findings we could identify three clusters listed in Table 2.

Table 2: The relative representation of the family in a business as a whole

Representation of the family in a business	Number of enterprises
0 – 25 %	28
26 – 50 %	43
More than 50 %	16

Source: primary research, own processing

Table 2 shows that 43 business entities belong to an interval where family has a share in business from 26 to 50% in the business activity. On the contrary, the smallest group is formed by enterprises where family involvement in business activity is over 50%. There are 16 businesses in this category. The second largest group was formed by businesses, where family involvement in business activity was on a scale from 0 to 25%. There are 28 businesses in this category.

4. Which are the most significant problems in family businesses

The most significant problems family business face is the financial coverage of business activities, difficulties in work-life balance, differences between expectations and the reality in family businesses and the problem of succession.

5. The issue of succession/continuity, resp. how businesses plan to solve this problem

The succession took place in 14 business units, where the company was taken over by the new generation of family members. Another 23 businesses are preparing for succession and 5 business entities out of 23 are trying to solve this problem acutely. The younger generation is not very interested in taking over the family business. The rest of the companies have not been dealing with this issue yet.

4. Conclusion

Business entities are the basis of the market economy of each country and represent the cornerstone of the economy. Beside the large multinational companies, small and medium-sized enterprises (SMEs) represent over 95% of all businesses operating on the market. A particular category in this segment of the economy is represented by family businesses, which appeared after the political-economic transformation of economies in the late 20th and the early 21st century.

The importance of family businesses cannot be underestimated, because in addition to classical functions of enterprise they have further typical characteristics:

- combine family and work,
- create jobs for family members,
- enable the realization of own ideas,
- they are responsible players on the market.

In this paper we have focused our attention on evaluation of family entrepreneurship in selected self-governing regions of Slovakia in order to present some areas of entrepreneurial development in these businesses. At the same time we conducted interviews, we identified the most serious problems faced by family businesses in Slovakia:

- lack of legislative definition of family business, family entrepreneurship,
- inconsistency in the approach family businesses are understood,

- difficulty in combining family life and business,
- time-consuming to ensure all the activities expected from family members in family and workplace,
- financial coverage of entrepreneurial activity,
- inadequate support for development of family businesses by the state and others.

Acknowledgements

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The Comparison of the Euro and the US Dollar

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Abstract

The US dollar (USD) is the official currency of the United States and the de facto currency for international trade and a reserve currency for much of the world. The Euro (EUR) is the currency of 19 European countries and very often marked as the main currency of the European Union. This research paper focuses on the comparison of the euro and US dollar, their history, evolution and organisations. It also deals with institutions and people, who direct these currencies and with factors, which influence them.

Key words: currency, euro, US dollar, monetary policy, comparison.

JEL Classification: E40, E49

1. Introduction

The EUR / USD currency pair is currently highly watched and analyzed daily. The meaning of monitoring their development creates an interest in the global strength of the two mentioned currencies. An important fact is that the exchange rate between EUR and USD represents a certain comparison of the two most economically advanced economies of the world. The aim of both currencies is to gain and maintain the status of world leading currency, which will be internationally recognized in all countries.

The objective of our work is to compare the status of the euro against the US dollar and to analyze its development in the near future. In the first and second chapters, we characterize the factors which influence the development and status of both currencies in the international financial market. We are dealing with a brief history and the origin of the US dollar and the Federal Reserve System, the euro and the European Central Bank. We also focus on the roles and objectives of the two mentioned institutions.

In the third chapter we concentrate on the characteristics of the determinants of the EUR / USD exchange rate development, especially on the balance of payments, stock, share, technological and other indexes in the given economy, interest rates, interventions of central banks and domestic economic, social and political conditions.

In the fourth chapter, we analyze the position of the euro against the dollar, we review individual economic point of views on the current position of these currencies.

At the very end of the paper, we evaluate the position of the euro nowadays, its benefits as well as its benefits for Slovak Republic. At the same time we focus on the question, whether the euro could replace the US dollar as the world's dominant currency in the near future.

2. Origins of the dollar

The US constitution provided the United States Congress with the power “to coin money.” The first dollar coins were issued by the United States mint in 1792 and were similar in size and composition to the Spanish dollar. The Spanish dollar and Mexican dollar remained legal tender until 1857, as did the coins of various English colonies (Kolar, 2009).

The US dollar is labelled by a symbol \$, which is crossed by one or two continuous lines. According to ISO, the US dollar has code 4217. During the gold standard the weight of coins was adjusted to 23.22 grain. American dollar was bound to silver until 1900. After that year, the US dollar was bound only with gold, when the silver from all the coins started to remove. In 1933, after the Great Depression, in the so-called “gold seizure” gold coins were withdrawn from the circulation. The weight of the gold for dollar was again adjusted to 13.71 grain. This standard lasted up to 1968. The agreement, which was signed in 1944 in New Hampshire, established international monetary system of the dollar. Two new institutions were created - the International Monetary Fund and the International Bank for Reconstruction and Development. The Bretton Woods monetary system, which came into force in 1945, procured foreign currencies fixing the value of its currency based on the gold content. The US dollar was the only currency convertible into gold (at a ratio of 35 USD per one ounce of gold), which played the role of world currency in this monetary system. The system collapsed in 1971 as well as convertibility of the dollar into gold. January 1, 1975 the US dollar entered the era of floating rates on currency markets. The nominal value against the Trojan coin rose by 2009 from 42.22 up to 1 000 USD/ounce (Kolar, 2009).

The US dollar became the world currency mainly in the 20th century, when there was the economic dominance of the USA as a world power.

The US dollar is the official currency of the United States and its overseas territories. It is also used as the sole currency in Palau, Micronesia and the Marshall Islands, and is also used in Panama, Ecuador, El Salvador, East Timor, the British Virgin Islands, Turks and Caicos Islands, Bonaire and Sint Eustatius and Saba.

2.1 Federal Reserve System

The United States of America was affected by banking panics in the 19th century. People were suddenly trying to convert bank deposits into cash. After finding that banks have insufficient cash reserves (because cash reserves are limited and smaller than the volume of bank deposits), the collapses of banks and the overall economic downturn came. The resulting panic in 1907 led to the adoption of the Federal Reserve Act from the year 1913. Its objective was to ensure the establishment of the Federal Reserve Banks and the Federal Reserve System. (Nordhaus, Samuelson, 2000, p. 512-513).

The Federal Reserve System is the central bank of the United States of America. It performs five general functions to promote the effective operations of the US economy and, more generally, the public interest. The Federal Reserve:

- **conducts the nation's monetary policy** to promote maximum employment, stable prices and moderate long-term interest rates in the economy of the USA,
- **promotes and achieves the stability of the financial system** and seeks to minimize and contain systemic risks through active monitoring and engagement in the USA and abroad,
- **promotes the safety and soundness of individual financial institutions** and monitors their impact on the financial system as a whole,
- **fosters payment and settlement system safety and efficiency** through services to the banking industry and the US government that facilitate the US dollar transactions and payments,
- **promotes mainly consumer protection and community development** through consumer-focused supervision and examination, research and analysis of emerging

consumer issues and trends, community economic development activities and the administration of consumer laws and regulations.

(Board of Governors of the Federal Reserve System, 2017)

In establishing the Federal Reserve System, the United States was divided geographically into twelve Districts, each with a separately incorporated Reserve Bank. District boundaries were based on prevailing trade regions that existed in 1913 and related economic considerations, so they do not necessarily coincide with state lines (Board of Governors of the Federal Reserve System, 2017).

In fact, each of the 12 Reserve Banks was intended to operate independently (from other Reserve Banks in the USA). Variation was expected in discount rates--the interest rate that commercial banks were charged for borrowing funds from a Reserve Bank. The setting of a separately determined discount rate appropriate to each District, was considered the most important tool of monetary policy at that time. The concept of national economic policymaking was not well developed, and the impact of open market operations--purchases and sales of US government securities--on policymaking was less significant (Board of Governors of the Federal Reserve System, 2016).

We can state, that this independence is very useful because the decisions of each Reserve Bank are done quicker. These decisions are obligatory only for the region where it has a competence. The big advantage is, to eliminate a bureaucracy.

As the nation's economy became integrated and more complex, through advances in technology, communications, transportation, and financial services, the effective conduct of monetary policy began to require increased collaboration and coordination throughout the System. This was accomplished in part through revisions to the Federal Reserve Act (1933) and in 1935 that together created the modern-day Federal Open Market Committee (FOMC). (Board of Governors of the Federal Reserve System, 2017)

The Depository Institutions Deregulation and Monetary Control Act of 1980 introduced an even greater degree of coordination among Reserve Banks with respect to the pricing of financial services offered to depository institutions. There has also been a trend among Reserve Banks to centralize or consolidate many of their financial services and support functions and to standardize others. Reserve Banks have become more efficient by entering into intra-System service agreements that allocate responsibilities for services and functions that are national in scope among each of the 12 Reserve Banks. (Board of Governors of the Federal Reserve System, 2017)

2.2 Monetary policy of Federal Reserve System

Monetary policy is very important part for the FED. The main three goals are (specified by Congress):

- 1.) maximum employment,**
- 2.) stable prices,**
- 3.) moderate long-term interest rates in the United States.**

(Board of Governors of the Federal Reserve System, 2016)

The Federal Reserve conducts the nation's monetary policy by managing the level of short-term interest rates and influencing the availability and cost of credit in the economy. Monetary policy directly affects interest rates but indirectly affects mainly stock prices, wealth and currency exchange rates. Through these channels, monetary policy influences also investment,

production, employment and inflation in the United States of America. (Board of Governors of the Federal Reserve System, 2016)

We can say, that the monetary policy is in the hands of the Federal Reserve System but on the contrary, National Central Banks of the EU, which lost this policy to the benefit of the European Central Bank. This institution is the only one, which influences and controls this policy in the EU. Also Federal Reserve System has a bigger responsibility and a direct share on the control of monetary policy and the most important thing is that it has much more quicker reaction on unexpected things.

3. Origins of the Euro

The Euro was introduced to financial markets on January 1, 1999. Coins and banknotes entered circulation on January 1, 2002. Until this time euro exists only in cashless cycle. After the Maastricht Treaty in 1992, most EU member states were obliged to adopt the Euro after meeting monetary and budgetary requirements. However the UK and Denmark negotiated exemptions and Sweden rejected the euro in a referendum. All new members of the European Union since 1993 have pledged to adopt the Euro.

The euro is the official currency of the Eurozone, which is made up of 19 of the 28 member states of the European Union (European Central Bank, 2017).

3.1 European Central Bank

The European Central Bank (ECB) is the central bank of the 19 European Union countries, which have adopted the euro. Our main task is to maintain price stability, and financial stability in the euro area and so preserve the purchasing power of the single currency. The ECB is an official institution of the European Union at the heart of the Eurosystem as well as the Single Supervisory Mechanism for banking supervision. Nowadays the president of the ECB is Mario Draghi from Italy. Over 2,500 staff from all over Europe work for the ECB in Frankfurt am Main, Germany. They perform a range of tasks in close cooperation with the national central banks within the Eurosystem and, for banking supervision, with the national supervisors within the Single Supervisory Mechanism. Since 1 January 1999 the European Central Bank (ECB) has been responsible for conducting monetary policy for the euro area - the world's largest economy for the United States (European Central Bank, 2017).

The euro area came into being when responsibility for monetary policy was transferred from the national central banks of 11 EU Member States to the ECB in January 1999. Greece joined in 2001, Slovenia in 2007, Cyprus and Malta in 2008, Slovak Republic in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015. It is also the sole currency of Montenegro and Kosovo, several micro states (Andorra, Monaco, San Marino, the Vatican City) and overseas territories of EU states: Mayotte, Saint Pierre and Miquelon, and Akrotiri and Dhekelia. The creation of the euro area and of a new supranational institution, the ECB, was a milestone in the long and complex process of European integration.

To join the euro area, 19 countries had to fulfil the convergence criteria as will other EU Member States prior to adopting the euro. The rest of the countries must adopting euro – currency, but the time, when these countries have adopt euro is not determined, although there is an obligation, that they have to do this. The convergence criteria set out the economic and legal preconditions for countries to participate successfully in Economic and Monetary Union (European Central Bank, 2017).

3.2 Monetary policy of the European Central Bank

The legal basis for the single monetary policy is the **Treaty on the Functioning of the European Union** and the **Statute of the European System of Central Banks (ESCB) and of the European Central Bank**. The Statute established both the ECB and the European System of Central Banks (ESCB) as from 1 June 1998. The ECB was established as the core of the Eurosystem and the ESCB. The ECB and the national central banks together perform the tasks they have been entrusted with. The ECB has legal personality under public international law. European System of Central Banks (ESCB) comprises the ECB and the national central banks (NCBs) of all EU Member States whether they have adopted the euro or not (Slovak Republic including). The Eurosystem comprises the ECB and the NCBs of those countries that have adopted the euro, and the Eurosystem and the ESCB will co-exist as long as there are EU Member States outside the euro area. The Euro – area or the area of the countries, who used currency euro is bigger and bigger, nowadays are built of 19 countries of the EU (Kotlebová, Chovancová, 2009).

4. Determinants of the exchange rate EUR/USD

The exchange rate between the dollar and the euro is the most watched in recent years. Mutual comparison between the euro and the dollar is the juxtaposition of two economically most developed economic units of the world. Every day mutually exchange rate changes, due to different situations on the domestic market and the euro area, but also in the global economy (Moravová, 2009).

There are various factors which influence the exchange rate of the euro against the dollar:

- a)** the balance of payments - the value of dollar depends on the balance of payments of the USA. On the one hand, there is the deficit of current account of the balance of payments and on the other hand, the inflow of funds into the United States. American companies created profits in the late 90s and it resulted in the rise of prices of their shares. US bonds offered relevantly high returns. Foreign investors had an interest in American securities, by which the dollar was more appreciated. Besides, in the USA the problem with the deficit of current account arose, when the households spend too much money and ran into debt.
- b)** stock, share, technological and other indexes in the economy - the most important indexes are:
 - + business climate index,
 - + share index Dow Jones,
 - + Japanese share index Nikkei - similar to the Dow Jones Industrial Average (DJIA),
 - + technological index Nasdaq 100,
 - + index of consumer confidence,
 - + index of purchasing managers PMI,
 - + NAMP - index of the US National Association of purchasing managers in the manufacturing sector,
- c)** interest rates,
- d)** intervention of central banks,
- e)** domestic economic, social and political conditions,
- f)** the position of the dollar in the world.

(Moravová, 2009)

5. Euro vs US Dollar

Nineteen countries now use the euro as their currency. Fifty states use the dollar as their currency. U.S. states are more homogeneous than Euro-zone countries. U.S. states share a national government, including fiscal policy, they speak a common language, they have been economically integrated much longer, they have had freedom of movement much longer and so on. Because of the scope of 50 states most of their trade is internal rather than external, so a change in the price of the dollar relative to foreign currencies has less impact on their trade than would the price of a Texas dollar or a Colorado dollar (Forbes, 2015).

The Euro-zone has been working toward more homogeneity so that its 19 countries are more nearly similar to U.S.'s 50 states. The common Euro exchange rate with outside countries is likely to be more appropriate for some countries than others, as is a common monetary policy by a common central bank. Strong Germany shares these things with weaker countries like Greece, Spain, and Italy (Forbes, 2015).

In 2017 euro will be a very strong currency, because many traders and operations will continue in this currency, and the power of it will be stronger, because the buyers will have a bigger confidence in this currency.

One of the burning questions that will vex global investors in 2017 is whether the euro will still be in existence by the end of the year. That may seem a bit of a shocker to comprehend, as the euro enjoys a little year-end short squeeze – but without a doubt the single currency looks set to have an extremely rough ride this year. But weak economics, dodgy money, bad budgets and ugly politics will all have it in for the euro. Eurozone policymakers will be pushed to the limit to stop the currency going over the edge of a precipice. Despite its year-end flurry, the euro remains perilously poised above parity against the US dollar. A plunge below EURUSD 1.0 should be on the cards early in the New Year. And it's not just the dollar on a rampage, but the realisation among global investors that the single currency has been skating on thin ice for far too long and the cracks are starting to spread. Weak economics remain at the root of the currency's vulnerability. Germany may be showing some brighter glimmers of life going into 2017, but, outside, most of the euro zone is a zombie economy, kept alive by a surfeit of cheap and easy money from the European Central Bank's super-stimulus programme. But that's not going to last forever. There is no plan to cut back the ECB's asset-purchase programme just yet, but clearly there are already discussions in Frankfurt (Brown, 2017).

The recent rapid depreciation of the Euro should be very helpful to the countries with weaker economies. The importers and exporters of each country will be impacted, for better or worse, by developments in other countries. German car companies, to the extent that they produce domestically for foreign markets will get a windfall caused, for example, by weak tourism in Greece and Italy (Forbes, 2015).

Mutual development of the euro and the dollar is one of the most watched variables in the present. This is for many reasons, including the fact that the interaction rate of the euro and the dollar is a comparison of the status and performance of the two economically most developed economic entities of the world, or the fact that in these two currencies the substantial amounts of foreign exchange reserves of almost all countries of the world are denominated. For all these and many other reasons, the trend of a currency pair EUR / USD is daily closely monitored and analyzed.

6. Conclusion

In this research paper we concentrated on the basic characteristics of the euro and the US dollar. Particular organisations that are responsible for the performance of monetary policy have similar features, in the euro, it is the European Central Bank and in the US dollar it is Federal Reserve System. We mentioned also various economic factors which influence these currencies but at the same time there are political events and unexpected situations (crises), which can cause problems also to the currencies, like these two. In our conditions it is necessary to focus on the development of the euro while from January 1, 2009, the euro is used as the official currency. In spite of negative opinions and problems, the euro is still continuing up to now and thus approaching to almost 20 years of its existence. From this reason, the euro is considered to be as a stable and strong European currency.

Finally, we can say, that the Euro and the US dollar will belong to our future. They are so strong currencies, that, if an unexpected situation happened, it would definitely not lead to the fall of any of these currencies. Nowadays, the euro and US dollar are used in many countries and are very important currencies in international trade. For example, the situation in Syria, where an armed international conflict can happen, belongs to the main factors, which can negatively influence both of these currencies.

Euro currency is used in the largest world economy area which is still increasing. Many countries use euro and they are satisfied, the living standards and the conditions of life in these countries (including Slovak Republic) are still improving. Other countries, which adopted euro, have the similar development too. In the near future, also other European Union countries are going to adopt the euro, what will mean a very big competition for the US dollar. There will also be a bigger acceptance of the euro from other parts of the world, especially from Asia.

US dollar has an advantage, that this currency is used for oil and this raw material is introduced in US dollars, by which it is obtaining greater popularity and importance almost all over the world. According to the statistics, this currency will be used for oil for many many years and the possibility, that the euro can replace it in this position is very small.

Slovak Republic, as a member of the Euro area, can only profit from it, not only on the basis of international trade and obtaining investors, but also on travelling to the countries which are using the euro (it is not necessary to change money) and cheaper shopping, mainly in countries, which do not use the euro.

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Strategy Analysis of Turkish Airlines and Emirates Airlines: Based on SWOT analysis

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Abstract

The strategic importance of global competitiveness of the airline industry is steadily increasing, and therefore airline companies require effective corporate strategy to achieve sustainable competitive advantages. Environmental analysis is a critical part of the strategic management planning process. Good performance within a company is the result of correct interaction of business management with its internal and external environment. The recognition of internal strengths and weaknesses, as well as external opportunities and threats, takes place on the basis of a SWOT analysis. The SWOT (Strengths, Weaknesses, Opportunities, Threats) framework is proposed by many as an analytical tool which should be used to categorize significant environmental factors both internal and external to the organization. SWOT analysis has been praised for its simplicity and practicality. As a framework it has been widely adopted but, generally, its use has been accepted uncritically. It is timely to reappraise its value as a strategic management tool. SWOT should not be viewed as a static analytical tool with emphasis solely on its output. It should be used as a dynamic part of the management and business development process. This paper demonstrates a strategic analysis comparison of Turkish Airlines and Emirates Airlines based on SWOT analysis.

Keywords: Airline Industry Strategic planning SWOT analysis

JEL Classification: M30, M31

1. Introduction

The strategic importance of global competitiveness of the airline industry is steadily increasing, and therefore airline companies require effective corporate strategy to achieve sustainable competitive advantages (Phadermrod, 2016). Understanding the business environment is key to a strategic planning process. Among the most important tools to assist such understanding is the SWOT analysis (Ying, 2010). Furthermore, It helps organizations to gain a better insight of their internal and external business environment when making strategic plans and decisions by analysing and positioning an organization's resources and environment in four regions: Strengths, Weaknesses, Opportunities and Threats (Rachid, 2013). Strengths and Weaknesses are internal factors that support and prevent organizations to achieve their mission respectively. While Opportunities and Threats are the external factors that enable and disable organizations from achieving their mission (Dyson, 2004). By identifying the factors in these four fields, the organization can recognize its core capabilities for decision-making and building strategies.

SWOT analysis is one of many tools that can be used in an organization's strategic planning process. Other tools that are usually used for strategy analysis are PEST analysis, Five Forces analysis, and 3C analysis (Akiyoshi & Komoda, 2005). Lately, a survey about analytical methods used by enterprise in South African for environmental scanning also demonstrates that SWOT analysis is the most frequently used analytic tool with 87% of respondents followed by competitor analysis with 85% of respondents (Du Toit, 2016).

This paper demonstrates a strategic analysis comparison of Turkish Airlines and Emirates Airlines based on SWOT analysis and paper is structured as follows. Section 2 presents a “SWOT” analysis of Turkish Airlines, highlighting strengths, weaknesses, opportunities, and

threats of the future development of Turkish Airlines strategy and it is used for comparison. Section 3 presents a “SWOT” analysis of Emirates Airlines, highlighting strengths, weaknesses, opportunities, and threats of the future development of Emirates Airlines strategy and it is used for comparison. Subsequently, Section 4 illustrates the comparison of Turkish Airlines and Emirates Airlines SWOT analysis. Section 5 concludes this paper.

2. SWOT Analysis of Turkish Airlines

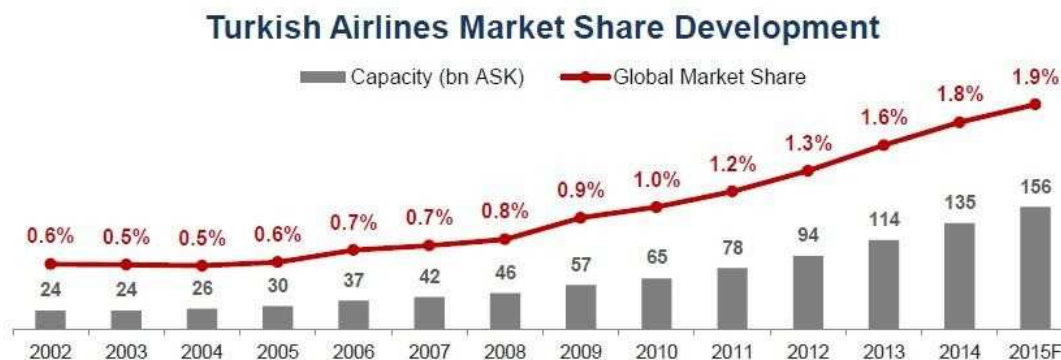
Turkish Airlines has won the Skytrax award for Best Airline in Europe six years in a row. As of 2015, Turkish Airlines flies to 287 destinations in total with 51 domestic and 236 international destinations. The Company’s passenger volume increased by 12.0% year-over-year to 61.2 million in 2015. Passenger volume grew by 15.8% on domestic routes and 9.3% on international routes (Turkish Airlines Annual Report, 2015).

- Strengths of Turkish Airlines

Turkish Airlines, with 287 destinations, flies to more countries than any other airline. The company’s hub and market are well positioned and has significant air traffic growth potential.

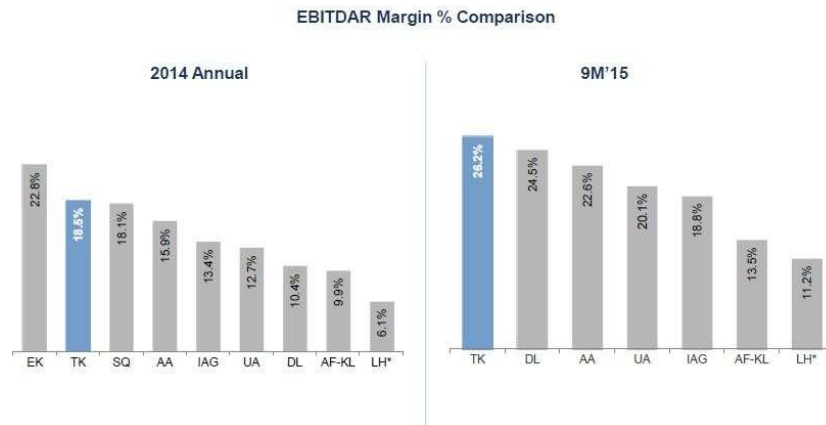
Figure 1: Turkish Airlines Market Share Development

Source: Turkish Airlines Annual Report, 2015



High quality of inflight service, brand awareness, and the safety concerns associated with competitors has helped Turkish Airlines to retain most of its existing customers and continue its price leadership. Additionally, having the biggest domestic network and seamless international and domestic passenger transit capabilities added further competitive advantages for Turkish Airlines. The company has powerful network in Europe. In 2015, Turkish Airlines %58 of passengers were on the routes to/from Europe. Turkish Airlines 2015 EBITDAR margin of %26 was higher than that of all of the European Big Three and the US Big Three legacy carriers (Turkish Airlines Annual Report, 2015).

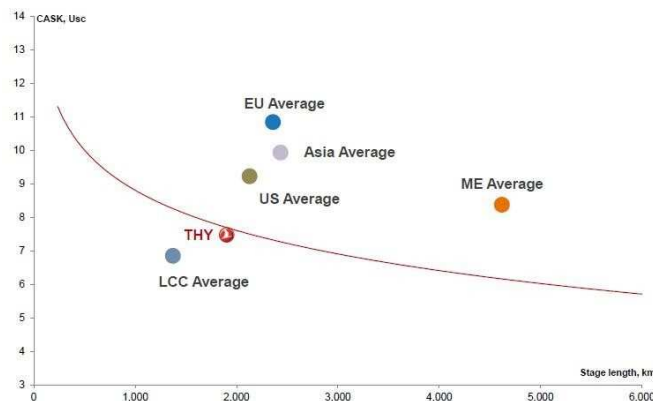
Figure 2: EBITDAR Margin of Turkish Airlines



Source: Turkish Airlines Annual Report, 2015

Turkish Airlines cost leadership gives additional advantage in comparison to its international competitors. Especially, the expected marginal price sensitivity of passengers from Middle East and Africa will offer Turkish Airlines in a more competitive position.

Figure 3: Turkish Airlines cost base compared to peers



Source: Turkish Airlines Annual Report, 2015

- Weaknesses of Turkish Airlines

Most of the flights of Turkish Airlines are only from Ataturk Airport which is not preferred by people located in Asia side of Istanbul. Even though Ataturk Airport's capacity provides 58 flights per hour, it is handling 67 per hour at peak times (Turkish Airlines Annual Report, 2015). Turkish Airlines has limited participation on social responsibility projects.

- Opportunities of Turkish Airlines

One of the most important opportunities the company has is the geographic location of the company. Istanbul, located only 3 hours difference to 50 countries, gives a unique advantage, making the city an international flight hub. Growth opportunity is supported by the booming economy in Turkey, a country with a population of 79 million people. National air travel demand is growing, helping the strong financials of the company. Turkey is investing its national transportation and liberalizing its policies, which will make it a more important spot for tourism. Additionally, there is an ongoing construction for the third airport, which will be the largest airport in the world with 150 million annual passenger capacity and it will help to company for improving their load factors which will improve their performance.

- Threats of Turkish Airlines

New entrants in domestic market which will affects the competitive environment for the company and influences the ability of the company to achieve profitability. New competitors entering the marketplace can threaten or decrease the market share and profitability of the company and may result in changes to existing product quality or price levels. Change in fuel prices which leads to increased ticket cost to customers. The next one is that risk of terrorist attacks in the planes and airports which will decrease the company's passenger volume and reputation. Promotions by competitors which will increase their market share and competitive advantage.

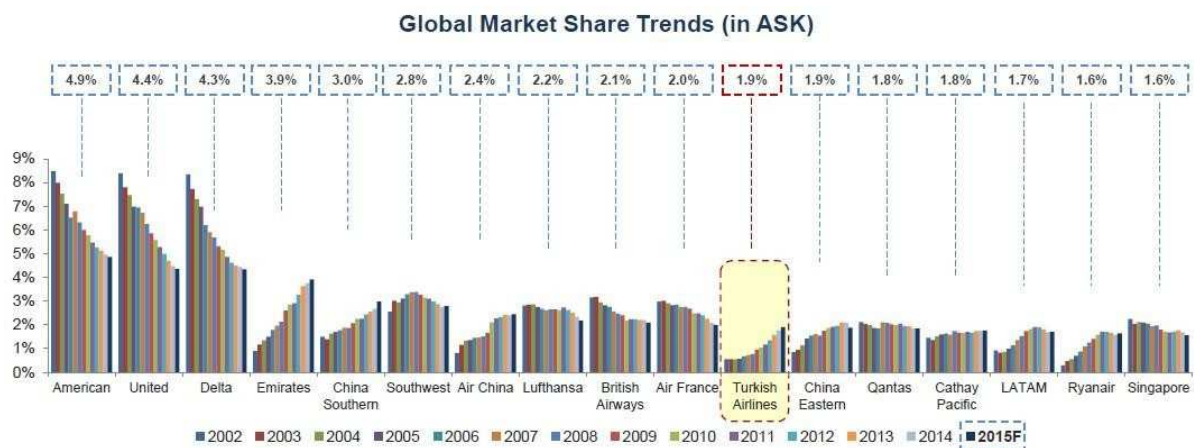
3. SWOT Analysis of Emirates Airlines

Emirates Airline was founded in 1985 with a flight from Dubai to Karachi using a leased A300 Airbus. Now the airline making 3,600 flights a week to 154 destinations in 81 Countries on 6 Continents. Emirates has won more than 500 international awards (Emirates Airlines Annual Report, 2015). As of 2016, Emirates was today named the World's Best Airline 2016 at the prestigious Skytrax World Airline Awards 2016, in addition to scooping up the awards for World's Best Inflight Entertainment for a record 12th consecutive year, and Best Airline in the MiddleEast.

- Strengths of Emirates Airlines

Emirates Airlines has huge advantage of being present in the Oil rich Gulf States as an airline company. The company's hub and market are well positioned and has significant air traffic growth potential.

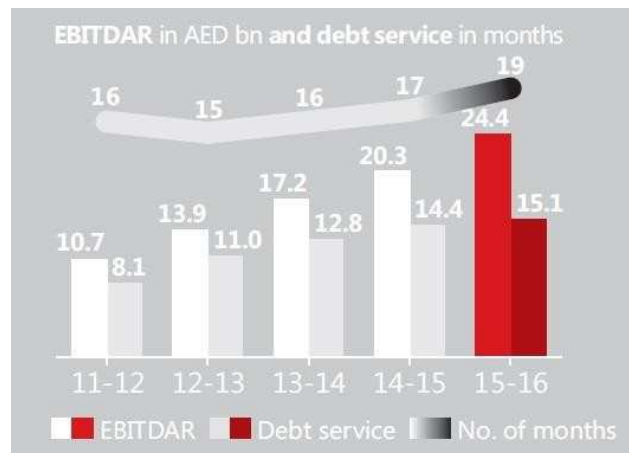
Table 1: Global Market Share Trends Emirates and Turkish Airlines



Source: Turkish Airlines Annual Report, 2015

Emirates Airlines one of the strengths is independence. Therefore, they have rejected the captivation of acquisitions and mergers with other airlines companies. The reason behind this is that they predicted that such actions will smother their flexibility and restrain the company to change direction rapidly. The company also decided to allow free competition by reason of the fact that they believe supporting competition would increase their standards and the company will be in a position to be a good performer within the industry.

Figure 4: EBITDAR Margin of Emirates Airlines



Source: Emirates Airlines Annual Report, 2015-2016

Nowadays, the companies are aware of their carbon footprint and Emirates Airlines have made key decisions regarding their own environmental programme. Therefore, they are investing to a great extent in the 850 seat A380 Airbus which are the worlds most fuel and emission efficientplanes.

- Weaknesses of Emirates Airlines

Some of the Emirates Airlines's diversification and approach have not been successful. Therefore, this can be considerate as one the weaknesses of the company. The company ocusing too much on their high end acquisition's and diversification in despite of the risky effect of such decisions (Swot and Emirates, 2013).

- Opportunities of Emirates Airlines

Emirates Airlines has huge opportunity for growth regarding their physical location. Growth opportunity would be supported by the booming economy in China and with that growth comes a greater demand for air travel and air freight movements (Swot and Emirates, 2013). Therefore, the company can expand itself in other regions of Asia Pacific for the betterment of its whooping profit as well as the hosting countries, spreading positive market throughout theregion.

- Threats of Emirates Airlines

Competition in the airline industry is excessive as barriers to entry are low due to liberalization of market access, as a result of globalization. Therefore, one of the important threats of the airline companies is new entry. New competitors entering the marketplace can threaten or decrease the market share and profitability of the company and may result in changes to existing product quality or price levels. Other threat of the company that change in fuel prices which leads to increased ticket cost to customers. As Emirates is stated owned property, and is at the edge to be affected by the government policies. So this may threat its working at any stance. The next one is that risk of terrorist attacks in the planes and airports which will decrease the

company's passenger volume and reputation.

4. Comparison of Turkish Airlines and Emirates Airlines SWOT Analysis

As a result of SWOT analysis; Turkish airlines and Emirates have great potential for growth. They have good position in airline industry. Emirates's strategy focus on controlling cost, increasing operational efficiency and customer while Turkish Airlines strategy is focusing on sustainable growth and profitability, brand awareness and attractiveness and customer. As SWOT analysis shows, two companies have similar threats (new entrants in industry, terrorist attacks, change in fuel prices and promotions by competitors) and opportunities (growth opportunities). This is because companies have same exterior environment. Therefore, companies have relatively close but different strategies. As internal analysis, they have different strengths and weaknesses. Turkish Airlines biggest strength is low cost which is close to low cost carriers and this gives the company cost leadership. Emirates's biggest strength is their independence and they have resisted the temptation of mergers and acquisitions with other airlines and therefore, the company is very flexible. Emirates more crucial weakness is diversification and not all of them was successful. Turkish Airlines most important weakness is limited capacity providing by Atatürk Airport and it will be solved with third airport which will open in 2018. According to results of SWOT analysis, even companies have similar opportunities and threats, they will have different strategies when they have different strengths and weaknesses.

5. Conclusion

This paper is presented SWOT analysis of Turkish Airlines and Emirates Airlines and comparison of airline companies analysis. In the study, Strengths, weaknesses, opportunities and threats and strategies are obtained relatively close with each other. Companies must be implement effective change and make improvements. For instance, Turkish Airlines could participate more on social responsibility projects and it will make company more successful. Therefore the company's brand attractiveness will increase. Emirates can accept the temptation of mergers and acquisitions with other airlines and it can give a carrier access to an already established market without having to build up a network from scratch and also powerfully strengthen an airline's dominance in the global industry. As a result of SWOT analysis, two companies must make those of effective changes in strategy and improvements. These will provided successful business carrier in the view of SWOT analysis.

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The opportunity and threats for the selected Ukraine company in the entering the international markets

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Abstract

The main objective of the diploma thesis titled as "The opportunity and threats for the selected Ukraine company in the entering the international markets" was the analysis major threats and opportunities for selected company during the entering the international market. In the theoretical part, we analyzed approach of individual authors to the concept of management. The practical part shows analysis of the financial and economic activity of the selected company, Limited Liability Company "Trade and production company Lvivholod". According to the results of SWOT analysis, we also described the main threats and opportunities for the company in entering the international market. Last but not least, it was represented the recommendations for development company based on observations of previous analyses.

Key words: opportunity, threats, SWOT analysis, Limited Liability Company "Trade and production company Lvivholod".

JEL Classification: J11, J44, M1, M21

1. Introduction

Winter, years 2013 - 2014 had been a crucial period for Ukraine in general and its economy in particular. The revolution, the changing government, military operations in the east influenced all areas of the country. These changes were difficult to challenge for Ukrainian companies. Firms had to show the possibility for adaptation and countering negative factors of the environment. In general, these impact led to a complete halt of most large enterprises in the East of Ukraine. In such situation, enterprises are seeking to find new markets. In such circumstances, domestic companies enter the international market with the hope to stabilize its business in the new environment. However, most Ukrainian companies are defeated in the international market due to lack of experience, lower quality products, fierce competition.

For the formulation of the theoretical part, I chose the Ukrainian company Limited Liability Company "Trade and production company Lvivholod" (LLC "TPC Lvivholod"). Today LLC "TPC Lvivholod" is a company by the basic type of activity of wholesale, small wholesale and retail sale of food, household cleaning products, household goods, consumer goods and other types of products. The company also has its own production. Implementation of its products is going under the brand name "Kuharochka".

In the practical part I will execute:

- description of the main threats and opportunities for Ukrainian companies during entering the international market under current conditions of the economy;
- description of the companies, an example of the main suppliers and list the main competitors in the Ukrainian market;
- detailed analysis of financial and economic indicators of activity for LLC "TPC Lvivholod";
- conducting SWOT analysis, assess opportunities, threats, strengths and weaknesses of the company, selection for the main components SWOT model;

- creating the structural model of the formation strategic potential of the LLC "TPC Lvivholod";
- choice of strategy and assess the feasibility of entering the foreign level;
- recommendations for improvement activity of the LLC "TPC Lvivholod".

2. Data and Methods

The structure of the final thesis consists of two main parts, the theoretical and practical part. In the theoretical part, we had to investigate conditions in international markets, describe the state of Ukrainian economic market and represent the main threats and opportunities during entering a foreign market. For this research, I have used the following sources:

- books of Ukrainian, Slovak and other foreign authors;
- research papers of authors describing their opinions and ideas, that are closely related with the investigated topic;
- Internet resources;
- scientific journals related to the topic of work;
- data from the website State Statistics Service of Ukraine.

The subject of the practical part was to identify opportunities and threats in entering the international market for the selected company. For this research, we chose LLC "TPC Lvivholod". Therefore, this company was the object of our practical analysis. For a complete research of the enterprise, we used the following sources:

- for the general characteristics of the company, we used data from the official web page LLC "TPC Lvivholod";
- to describe the functions of structural departments of our company, it was necessary to use Statute of LLC "TPC Lvivholod";
- to make analysis of the financial and economic activity of the enterprise we had to use the data from company statements. The reliability of data usage confirmed by a certificate issued by LLC "TPC Lvivholod";
- to identify the main opportunities and threats of the chosen company, we used SWOT analysis model. In developing the SWOT model, we analyzed the economic, political, sociodemographic and technological factors, which have an influence on the business activity of LLC "TPC Lvivholod";
- based on the preference of opportunities and strengths of the company, we have created the structural model of the formation strategic potential of the LLC "TPC Lvivholod".

Moreover, during writing the thesis, we used the following research methods:

- synthesis method; method of analysis; deduction; induction; method comparison.

3. Results and Discussion

3.1 The main opportunities for Ukrainian companies during entering the international market

In the Ukrainian economy, it can be selected few real opportunities of entering virtually any private company in international business. Some of this opportunities are inherited from the Soviet Union, others were arose in the post-reform period.

According to own researchers, it was found the most significant opportunities for Ukrainian business. The use some of these opportunities requires a serious level of technological development, while others require corresponding skills and knowledge businessmen and

managers. Finally, a number of these possibilities include the high level of expenditures, while others allow firms to act with relatively modest financial resources. Important is that these opportunities relate to almost all industrial sectors:

- Penetration into the process chain of foreign manufacturers;
- The use of national advantages by firm;
- Entry the international business through the use of international economic cooperation;
- Return of old markets;
- Assessment technology;
- The corresponding exports.

In addition, it is necessary to say that the best result will be obtained by Ukrainian company, which will put aim to use multiple directions. Transition to standard procedures (deep analysis of the economic, political, legal and cultural environment) is meaningful only when an international manager believes that the execution of this analysis in vain is relatively small.

3.2 The main threats for Ukrainian companies during entering the international market

In recent years in Ukraine, there are a lot of changes (revolution, anti-terrorist operation). These factors directly affect the economic situation in the country. Unfortunately, there are a number of significant threats, which adversely affect the Ukrainian business. All threats were found by author's own research:

- Military operations in the eastern part of the country;
- Lack of knowledge and experience;
- Level of corruption;
- The low level of competitiveness due to the low quality and non-certified products;
- The process of crossing the border.

3.3 History of Limited Liability Company "Trade and production company Lvivholod"

A Limited Liability Company "Trade and production company Lvivholod" is research object of this final work. LLC "TPC Lvivholod" location is Lviv, Uhorska Street, 22.

Today LLC "TPC Lvivholod" is a company by the basic type of activity of wholesale, small wholesale and retail sale of food, household cleaning products, household goods, consumer goods and other types of products, assortment's list is over than 100 product groups. Company also has its own production. Figure 2 shows the logo of the company.

The organizational structure of the company is the composition of departments, services, and subdivisions. The management system of the organization is characterized by subordination and accountability to the supreme body of management. The company also has the set of coordinating and informative connections, the order of distribution of management functions for to the different levels and subdivisions of the administrative hierarchy. Within the limits of organizational structure, there are all administrative processes and functions, that provide normal activity of enterprises.

3.4 SWOT analysis of LLC "TPC Lvivholod"

SWOT-analysis is the process of making connections between the opportunities, threats, strengths and weaknesses of the company. The results of SWOT-analysis can be used to formulate and selection strategies for LLC "TPC Lvivholod". SWOT analysis is represent in the Table 1.

Table 1: SWOT analysis of LLC "TPC Lvivholod"

INTERNAL ANALYSIS				
	STRENGTHS		WEAKNESSES	
ECONOMICS	increasing of the net profit	3	liquidity ratios	2
	business activity ratios	2	financial stability ratios	2
POLITICAL	leader in the western part of Ukraine	3	diminished employee morale	1
TECHNOLOGY	own production of products	3	lack of highly qualified staff	3
	modern technology	2		
RIVARLY	international standards for compliance	3	distribution of supermarket only on the west of the country	1
	good price	2	Still relatively small as compared to other brands	2
SUPPLIERS	supply of raw materials of high quality	2	high transportation cost	2
CUSTOMERS	loyalty program	2	bad location in some regions	1
	good services	2		
MARKETING	well known brand	2	weak advertising through TV and Internet	1
	website on the internet	3		
	good reputation	2		
STRENGTHS		31	WEAKNESSES	15
EXTERNAL ANALYSIS				
OPPORTUNITIES		OPPORTUNITIES		
ECONOMICS	closeness to the borders with EU	3	unstable currency exchange rate	3
	exports of goods under its own brand	3	increasing level of inflation	2
	increasing of market share	3		
POLITICAL	government program supporting exports	3	anti-terrorist operation in the east	3
			administrative barriers and bureaucracy	2
			rapidly changing legislation	2
SOCIODEMOGRAPHIC	migration from the eastern regions	3	changing preferences	1

	constant need of food products	2		
TECHNOLOGY	possibility to improve condition of equipment	2	fast development in the industry	1
	recruitment of employees with high qualifications	2		
RIVARLY	expansion of services and product range	3	price war	2
	following health trend: vegan, organic producing	2	branded companies with quality products	2
			lack of experience in international business	2
SUPPLIERS	establishing new supply channels	2	changing prices for raw materials by suppliers	3
CUSTOMERS	fulfillment of needs of the customers by expanding operations	2	loyalty to another brand	1
MARKETING	participation in fairs and exhibitions	2	high cost advertising	1
OPPORTUNITIES		32	THREATS	25

Source: Own processing, 2017

The most significant strengths

The most significant strengths of the company is that during last few years the net profit is increasing. Company reached good results for business activity ratios. Also, it is necessary to notice that company is one of the leader in the western part of Ukraine. Brand "Lvivholod" is one of the most popular and valuable in the region. Company is a distributor of the own production. Own products characterized as products with high quality and relatively low price. Strength is that in 2015 LLC "TPC Lvivholod" received certificates of compliance with international standards ISO 9001 and ISO 22000, which give opportunity to trade abroad. The company has a loyalty program "Family". Through this program, the customer is able to save on purchases within the "family circle." Each member of the "family" has a personal card, which accumulates points. At any time, these points can be used to pay for goods and services excluding alcoholic beverages. Company also has a good developed marketing sphere. For example, the website is very easy to use. There are no problems to find any general information about the company or information about production in particular.

The most significant weaknesses

Economic weaknesses are that liquidity and financial stability ratios have negative trend. This disadvantage may negatively affect economic and financial stability of the business. The company has opportunity to buy new technology. However, the lack of highly qualified staff slowing that process. Retraining process is carrying significant costs for businesses. For now, the company focus its activity only at the western part of Ukraine. It means that "Lvivholod" takes relatively small share of the market as compared to other brands.

The most significant opportunities

After analyzing the opportunities, we can determine the most significant for the business activity. The company is located close to the border with the European Union. This fact reveals about opportunity of establishing the trade ties with international partners without significant loss for transportation. To avoid the risk of absorption by competitors in the international market, at the beginning LLC "TPC Lvivholod" should just export products under its own brand. This action will allow company to check level of demand for its products. Also, this operation will show an expediency enter the international arena. If these first steps are successful, the company can open its own network of supermarkets abroad, gradually increasing its share of the market. In connection with the war in the eastern regions, there are a migration flows to the west. Highly skilled workers try to find new workplace. Lvivholod has the opportunity to hire these employees. New professionals will help expand and improve the business. Speaking of the political sphere, it is worth noting that the country has government program supporting exports, which stimulates to international business activities. Every year the company shows a net profit growth. This makes it possible to use funds to upgrade equipment, with which enterprise can compete internationally. Company also has opportunity to expansion of services and product range. This operations will increase the quantity of customers. Today is a new trend of bio and organic food. LLC "TPC Lvivholod" has the opportunity to grow organic products and distribute this production in its supermarkets. This step will help to attract new buyers and to increase the level of competitiveness.

The most significant threats

Due to the fact that in country is conducting anti-terrorist operation, the economy goes into decline. In particular, if a company wants to cooperate with international partners, in this case unstable exchange rate against foreign currencies is one of the most significant threat, which can lead to financial losses. Also, the lack of a sufficient level of expertise for penetration new markets can lead to unexpected additional expenditures either to the bankruptcy or acquisitions by competitors. Threat from suppliers is caused by increasing commodity prices. This fact increases the cost of production and thus the price of this product increase also. This situation can cause the transition of customers to competitors that have lower prices but the same quality of the production.

According to a study we can conclude that for an enterprise it is advisable to choose the strategy of stepping (SO strategy or strategy maxi-maxi). This strategy is the most desirable and promising for company that wants to expand the share of the market or start doing business at the new markets. The results of SWOT analysis are represent in the Figure 1.

Figure 1: The results of SWOT analysis

Source: Own processing, 2017

This strategy is characterised by support and development the strengths of the company towards the realization external environment opportunities. The strategy is aimed at maximizing the opportunities based on the existence of the strengths that company constantly strengthens. Certainly, the company also needs to pay attention to the weaknesses and try to reduce their amount. If the company will face with threats, the enterprise has to find ways to decrease their impact on the business to focus on the possibilities of the external environment.

4. Conclusion

After the investigations, we can conclude that the current state of Ukraine's economy is accompanied by general economic crisis. In such socio-economic condition, it is difficult to achieve the appropriate level of efficiency, to maximize profits, to be a leader in a tough competition. The formation of a stable economic situation requires the development of effective mechanisms and approaches that would allow to increase production efficiency, create favorable investment conditions, to ensure the competitiveness of products in the consumer market.

It was found that currently military-political conflict in Donbas is one of the major threats. Its negative impact on the domestic economy is manifested not only in complete stop or irregular work of many Ukrainian companies, but also in the formation of an atmosphere of uncertainty in business, local government and state.

For a long time Ukrainian society maintains expectations for a possible expansion of Russian terrorist aggression against Ukraine, not only in the Donbas, but also beyond. Simultaneously, the business environment keeps strong inflationary expectations. Based on these facts, it can be argued that external markets (including the EU market) will retain its importance for the Ukrainian economy. Also, this is related with limited possibilities of growing demand in the domestic market.

It should be noted, that also one of the main threats to the Ukrainian enterprises is the lack of compliance certificates of product quality to international standards. Benefits are available only

to those companies that have started to implement European standards in production in advance. For other enterprises the differences in regulations, procedures and technical requirements makes it impossible to export goods and services to the EU.

In this work we made an analyses of opportunities for Ukrainian companies during entering the international market. The main advantage is the ability of enterprises of Ukraine to penetrate into the process chain of foreign manufacturers. Ukrainian company may arouse interest a foreign manufacturer by producing some details needed for foreign partner to produce the final product. This feature allows domestic enterprises to avoid the fierce competition in the international market. This way provides an opportunity to reduce the costs of marketing abroad, since all of these issues will be addressed by foreign partner who makes the final product. Also, it is necessary to pay attention to the fact that those companies that are located close to the border with the European Union can find sales channels overseas, reducing transportation costs.

Recommendation for LLC "TPC Lvivholod":

- to pay attention to those indicators that have negative progress trend: indicators of liquidity and financial stability. In fact, deviation from the norms of these indicators, could negatively influence on the economic and financial security and can cause an imbalance in the company's activity or become a threat of bankruptcy for the company LLC "TPC Lvivholod";
- after the SWOT analysis, we determined that the strategy Maxi-Maxi (SO) is best for the company. Namely, the company should focus on strengths and orient to the expansion of the opportunities of the firm. According to the results, we recommend the company to focus its activity abroad;
- the company should not immediately open their own stores. LLC "TPC Lvivholod" has compliance certificates of product quality to international standards. According to this fact, the company will find a partners on the international market rapidly. Initially, the company could carry out the export operation of goods of own production. This will avoid the risk of takeover by competitors. Besides, this strategy will help to check the level of demand for products LLC "TPC Lvivholod";
- from the list of the main strategies of going international, our company should choose Trade Intermediaries Strategy. It will help LLC "TPC Lvivholod" to find places of sale faster through trade intermediaries, which have sufficient experience or resources to trade abroad. Also, the use of this strategy will help company to save time for founding international cooperating.

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Modelling of Transfer Pricing in Multicomponent Enterprises

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Abstract

A multicomponent enterprise employs transfer pricing as one of the tools for attaining better performance of the entire enterprise pursued by joint efforts of the responsibility centres assigned with this duty without compromising their respective autonomy. Any decision on the most appropriate transfer pricing method shall be preceded by analysis of the internal and external environment of the enterprise, building of strategy for the enterprise and each responsibility centre, identification of potential risks and their management options, as well as identification of the goals behind transfer pricing. Scientific literature also contains discussions on the transfer pricing methods applied in practice: market-based transfer price method, cost-based transfer price method, and negotiated transfer price method. Transfer pricing model in multicomponent enterprises has been developed following the analysis and descriptions of the assumptions of transfer pricing, analysis of the transfer pricing methods discussed in the scientific literature and their modalities. The model implies the choice of transfer price aimed at ensuring maximum possible profitability of operations by the responsibilities centres and the entire enterprise. The transfer pricing model has been verified by modelling and analysing the potential operations whereby the internal responsibility centres transact with each other and transfer pricing operations by employing data of the selected multicomponent enterprise.

Keywords: Cost-based Transfer Price, Market-based Transfer Price, Modelling, Negotiated Transfer Price, Transfer Pricing

JEL Classification: M11, M21, O12

1. Introduction

Transfer pricing is pricing of goods, services and intangible assets applied to transfer thereof between associated parties. Parties associated under a multicomponent enterprise cover responsibility centres (RC) and enterprise headquarters. Transfer pricing policy is an important measure supporting management of an enterprise in coordination of operations of subordinate autonomous RCs. Choosing a transfer pricing policy is an important factor of corporate governance, as transfer pricing is linked to many other operational and strategic processes inside the enterprise.

Transfer pricing is applicable to assessment of intra-company transactions, where mutual trade is conducted between RCs of the enterprise. This implies that while one RC gains revenue from sale of goods or services, another RC incurs costs resulting from purchase of goods or services. Transfer price influences costs and revenue of the both associated RCs, and the enterprise is expected to build its transfer pricing in a way as to avoid conflicts inside the enterprise that might have detrimental effect on its profits.

Calculation of a transfer price should support decision making on critical issues, in particular, the estimated price of a product, reasonableness of further production of the product, reasonableness of in-house production versus outsourcing of certain components, need for introduction of changes into production processes, development of new products, etc. Hence, transfer pricing enables an enterprise to undertake clearer allocation of tangible, financial or other resources, assess performance of certain RCs. This suggests the need for studies analysing the issues in transfer pricing, determining factors, potential methods, and developing the

transfer pricing model. The model developed would be expected to serve as a guidance for top management of a multicomponent enterprise and managers of its RCs in formation of the transfer pricing framework.

Aim of the study is to develop a transfer pricing model for the multicomponent enterprise following analysis and generalisation of transfer pricing factors, principles, and methods. The following objectives have been set out in view of the aim: 1) to analyse and generalise transfer pricing factors, principles, and methods in a multicomponent enterprise; 2) develop a transfer pricing model for a multicomponent enterprise; 3) test the potential of the model developed in the chosen multicomponent enterprise.

2. Data and Methods

Transfer pricing is the means to create an internal market in a multicomponent enterprise (Antic & Jablanovic, 2000). In scientific literature (Dragičević & Lalic, 2014; Erickson, 2012; Denčić-Mihajlov & Trajčevski, 2011; Gavius, 1999), transfer pricing is defined as a set price of products (services) produced by an enterprise and transferred (provided) between two entities under the same enterprise. Transfer price is defined as a charge for transfer of a good or service by an organisational unit to another organisational unit under the same enterprise. Transfer price may be used as an instrument for an enterprise to manage its intra-company market, coordinate decisions between autonomous divisions so as to avoid missing any good market opportunities (de Matta & Miller, 2014). Transfer price may also be a sign suggesting the principle of resource and profit allocation inside the enterprise (Plesner Rossing & Rohde, 2014; Adams & Drtina, 2010). Barrett (1977) has referred to transfer price as a mechanism for profit allocation between profit centres.

In order to analyse the role of transfer price and rationale behind its application in a multicomponent company as well as to develop the model for choice of transfer pricing method, the study has employed the methods of scientific literature analysis and synthesis, induction and deduction, comparison, generalisation. Choice experiment method and analytical data of the chosen multicomponent enterprise analysed in the context of particular situations have been used for verification of applicability of the transfer pricing models in the multicomponent enterprise. Results of the study are discussed in the form of conclusions.

3. Results and Discussion

Decision making and day-to-day operations are assigned to RC managers in enterprises with decentralized management structure (multicomponent enterprises). RCs are responsible for implementation of various functions that influence performance of the entire enterprise (Erickson, 2012). Application of transfer price provides top management and RC managers with information on costs and profitability inside the enterprise (Hieman & Reichelstein, 2012). In case of exchange in goods or services between RCs, transfer pricing is applied to coordinate and motivate, assess and control the RCs. Transfer pricing influences the level of RC activity, return on investment, and total profit. According Gavius (1999), major issue in application of transfer pricing is its considerable effect on operations of a multicomponent enterprise. Inappropriate transfer pricing may cause significant issues to the enterprise and damages. It is therefore very important that, when developing a transfer pricing model, any factors, which may influence formation of transfer pricing and results of the entire enterprise and RCs sought by the transfer pricing, are analysed.

Formation of transfer pricing starts with identification of goals of the enterprise. A transfer pricing model is expected to help bring balance into enterprise-RC and RC-RC operations, coordinate their strategies in order to support the enterprise in gaining maximum profit

(Hammami & Frein, 2014; Erickson, 2012; Adams & Drtina, 2010; Villegas & Ouenmiche, 2008; Antic & Jablanovic, 2000). According to Villegas and Ouenniche (2008), top management is set out to implement business goals, while each RC seeks its performance targets. RC goals may differ from goals of the enterprise or be in conflict with them. RC goals should be formulated in such a way as to make sure that attainment of all goals of an RC would go in line with attainment of a common corporate goal of the enterprise. Goal of the enterprise may refer to increase of profits, while an RC may have a goal of reducing the centre costs, thereby contributing to increase of the enterprise profits.

According to Denčić-Mihajlov and Trajčevski (2011), Adams and Drtina (2010), Jordan (1990), knowing which goals will be prioritized by the top management is important. An enterprise may have short- or long-term goals. Where the managers prioritize short-term goals – profit making – the transfer pricing model that leads to increase of RC profitability should be applied. A transfer price should encourage RC managers to undertake the level of production that would increase total profit of the enterprise (Chitiz & Briman, 2012). Where an enterprise and an RC have set out to implement a long-term goal – creation of values for shareholders – the transfer pricing model that would encourage investments into RC should be undertaken. An RC manager at a multicomponent enterprise may initiate investment projects. RC managers are aware of the investments needed, as they have better knowledge of the product, market, and business conditions (Indjejikian & Matejka, 2012). Top management, in turn, opts for the investment projects which increase the value of RC and the enterprise. According to Adams and Drtina (2010), in case conflicts regarding choice of the goal arise, top management should opt for long-term goals, as creation of long-term value for shareholders, rather than short-term benefit, should be the primary goal of an enterprise.

Prior to adopting the respective decisions, top management and RC managers identify any limitations that may hinder implementation of the goal, i.e. limitations of external and internal environment and their effect. Scientific literature (Plesner Rossing & Rohde, 2014; Erickson, 2012; Devonshire-Ellis, Scott & Woollard, 2011; Li & Ferreira, 2010; Chan & Lo, 2004; Borkowski, 1990; Jordan, 1990; Cravens, 1997) refers to the following external factors that influence transfer pricing: geographic location; branch of industry; technological change; market size and type (retail versus wholesale); accessibility of goods or services; consumer purchasing power. Plesner Rossing and Rohde (2014), Li and Ferreira (2010), Shor and Chen (2009), Borkowski (1990) have noted that internal environment the RC operates in, such as size and structure of the enterprise, level of autonomy, enterprise capabilities, technologies applied at the company, should be analysed during formation of transfer pricing.

The most favourable and appropriate transfer pricing method is then chosen in view of the enterprise and RC goals and their consistency, influence of internal and external factors. According to Borkowski (1990), degree of decentralization is the main factor in choosing a transfer pricing method. Li and Ferreira (2010) have identified the following degrees of decentralization: 1) low autonomy implying high level of control and little trust in RC managers, which usually leads to transfer price being set on the basis of cost level; 2) medium autonomy, where RC managers enjoy greater freedom in decision making, which means that not only costs, but also market price are considered when deciding on the transfer price; 3) high autonomy showing mutual trust between RC managers and top management. RC managers who enjoy high level of autonomy share all information with each other when negotiating on the transfer price, and view implementation of goals of their respective RCs as a form of benefit to the enterprise. RC classification, or the character of its operations, is important in choosing a transfer price method. According to Devonshire-Ellis et al. (2011), Schuster and Clarke (2010), each RC (investment, cost, revenue, profit) performs certain functions that determine the RC

goals and mutual relationship. Different transfer price methods are applicable to formation of a transfer pricing system at different product development cycles and different levels of product completion. Li and Ferreira (2010) have identified the following levels of product completion: semi-finished product, intermediate product; finished product; standardized (COTS) product; market entry stage of an article.

It is also important to remember during formation of transfer pricing that all stakeholders – both the RCs and the enterprise – must be profitable in their operations. Assuming that transfer pricing between two RCs (RC1 producing intermediate product and transferring it for further processing to RC2) is analysed, the possibility of RC1 also selling its intermediate product on the external market, if any, should also be taken into account. Costs may also be distributed between intra-company and external trade. This means that RC1 may receive profit from two sources (Wagenhofer, 1994):

$$\Pi 1 = \pi 1 V + \pi 1 I \quad (1)$$

Where

$\Pi 1$ - RC1 profit;

$\pi 1 V$ – share of RC1 profit from intra-company trade;

$\pi 1 I$ – share of RC1 profit from trade on external market.

On the other hand, RC2 may also procure the semi-finished product it needs from the external market, if it finds this option to be more profitable, rather than procuring it on the intra-market from RC1. It is therefore proposed to consider marginal utility of RC2 during formation of transfer pricing (Wagenhofer, 1994):

$$TP - k2 = d \quad (2)$$

Where

TP – transfer price;

$k2$ – direct costs of RC2;

d – marginal utility of RC2.

The proposed calculation of RC1 profit from intra-company trade is as follows (Leng & Parlar, 2012; Vaysman, 1998; Wagenhofer, 1994):

$$\pi 1 V = TP - k1 \quad (3)$$

Where

$\pi 1 V$ – share of RC1 profit from intra-company trade;

TP – transfer price;

$k1$ – direct costs of RC1.

Sahay (2014), Baldenius and Reichelstein (2006), Sahay (2003), Vaysman (1998) propose calculating RC profit from intra-company trade using the following equation:

$$\pi 2 V = R - TP \quad (4)$$

Where

$\pi 2 V$ – share of RC2 profit from intra-company trade;

R – total revenue (less all costs, except for those related to intra-company trade);

TP – transfer price.

Nevertheless, transfer pricing cannot be formed only in view of higher profitability of RCs engaged in mutual trade. Main goal of the top management is to increase profits and value of the enterprise. Enterprise profit is calculated using the following equation (Wagenhofer, 1994; Kanodia, 1979):

$$\Pi = \Pi 1 + \Pi 2 \quad (5)$$

Where

Π - total profit of the enterprise;

Π_1 - RC1 profit;

Π_2 - RC2 profit.

Expected enterprise profit is subject to limitations:

$$\Pi = \{\pi_{LL}; \pi_{LH}; \pi_{HH}\} > 0 \quad (6)$$

Where

Π - expected profit of the enterprise;

π_{LL} – expected minimum profit of the enterprise;

π_{LH} – expected medium profit of the enterprise;

π_{HH} – expected maximum profit of the enterprise.

Profit of the enterprise may be reduced by investments undertaken by an RC or managerial pays to RC managers. In view of the circumstances where managerial pays are granted to RC managers, enterprise profit may be calculated using the following equation: (Wagenhofer, 1994; Kanodia, 1979):

$$\Pi = \Pi_1 + \Pi_2 - s_1 - s_2 \quad (7)$$

Where

Π - total profit of the enterprise;

Π_1 - RC1 profit;

Π_2 - RC2 profit;

s_1 – managerial pay to RC1 manager;

s_2 – managerial pay to RC2 manager.

In case an RC has undertaken investments, Baldenius et al. (1999) calculate enterprise profit using the following equation:

$$\Pi = E_0 [M(\emptyset, I)] - w_1(I_1) - w_2(I_2) \quad (8)$$

Where

Π - total profit of the enterprise;

$E_0 [M(\emptyset, I)]$ – expected profit of the enterprise without investments;

$w_1(I_1)$ - amount of fixed costs allocated to investments of RC1;

$w_2(I_2)$ - amount of fixed costs allocated to investments of RC2.

Discussion of profitability requirements pertaining to transfer pricing and limitations of the expected profit should be followed by consideration of the transfer price method that would be the most appropriate for achieving the expected profitability. Scientific literature analysis (Sahay 2014; Hieman & Reichelstein, 2012; Veres, 2011; Schuster & Clarke, 2010; Dikolli & Vaysman, 2006; Li, 2005; Lengsfeld & Schiller, 2004; Antic & Jablanovic, 2000; Baldenius et al., 1999; Gavius, 1999; Sharav, 1974; Shillinglaw, 1957) has shown a variety of methods for choosing (forming) a transfer price. Transfer pricing methods are classified into two categories: administrative and negotiated transfer pricing methods (Vaysman, 1998). Administrative transfer pricing methods may, in turn, be classified into two groups: market-based or cost-based transfer pricing.

According to the study by Matsui (2013), 46.2 % of enterprises use cost-based method for calculation of transfer price. Data provided by Matsui (2013) show that 53.8 % of enterprises calculate their transfer price on the basis of actual or standard costs, 38.5 % calculate their transfer price on the basis of cost-plus method with mark-up, and only 7.7 % calculate their transfer price using variable costs. Cost-based method is the most effective when RC managers and top management communicate with each other. In case no secret arrangements, reservations

or misleading information are present in a multicomponent enterprise, transfer price may be chosen in view of the three best offers:

$$kL \leq TPLL \leq dL \quad (9)$$

$$kL \leq TPLH \leq dH \quad (10)$$

$$kH \leq TPHH \leq dH \quad (11)$$

Where

kL – minimum possible costs;

kH – maximum possible costs;

dL – minimum possible utility;

dH – maximum possible utility;

$TPLL$ – minimum transfer price;

$TPLH$ – medium transfer price;

$TPHH$ – maximum transfer price.

In case of failure to choose the transfer price that would fit all limitations under the cost-based method, another method should be considered. As emphasized above, market conditions are one of the external factors. Choice of a market-based method for transfer price should be preceded by market and competition analysis. Two market prices may be offered for intra-company trade (Wagenhofer, 1994):

- price p_1 , at which RC1 may sell its intermediate product on the external market;
- price p_2 , at which RC2 may procure its intermediate product from the external market;

where: $p_1 \leq p_2$.

The acceptable transfer price shall be $p_1 \leq TP \leq p_2$. Where $TP < p_1$, RC1 is not interested in the intra-company transaction, as selling the intermediate product on the external market is more beneficial. Where $TP > p_2$, it is more beneficial for RC2 to procure the intermediate product from the external market.

Negotiated transfer price may be applied only where RC has been assigned with a certain degree of autonomy (Li & Ferreira, 2010). RCs agree on whether they are willing to engage in mutual trade and set a transfer price. Three cases of negotiated transfer pricing are discussed in scientific literature (Baldenius et al., 1999; Wagenhofer, 1994).

In case I, RC2 is assumed to be responsible for placing a transfer price offer. For RC1 to accept the transfer price proposed, RC2 shall ensure that the price covers minimum costs of RC1. The submitted proposal on transfer price shall satisfy the following equality:

$$\phi_1 L (kH - kL) \leq \phi_1 H (dH - kH) \quad (12)$$

This means that the acceptable minimum transfer price may be equal to the minimum costs, while the maximum transfer price may be equal to the maximum costs, provided that RC2 receives maximum utility dH .

If both RCs enjoy equal rights in transfer price negotiations, transfer price is formed on the basis of medium utility and cost values:

$$\phi_1 L (dH - dL) \leq \phi_1 H (dH - kH) \quad (13)$$

$$\phi_2 H (kH - kL) \leq \phi_2 (dL - kL) \quad (14)$$

In case III, the power in negotiations belongs to RC1. During the negotiations, RC managers agree on the amount of intermediate product and its transfer price to be paid by RC2.

The developed transfer pricing model has been verified using the choice experiment method. Formation of transfer price in a multicomponent industrial company has been performed following the consistency of the transfer pricing model developed by authors of the study: goals of the enterprise and RC, consistency between them and strategic business directions have been identified; factors of internal and external environment that influence the goals of enterprise and RCs have been analysed; goals of transfer pricing have been defined. Final stage of the study has involved analysis of the transfer pricing methods, their choice, specifics and efficiency of their application. The transfer pricing method that fits the limitations and provides maximum expected profit is chosen.

Choice of the transfer pricing method has been analysed using the example of five situations. Analysis of each situation has involved assessment of internal and external factors, analytic data on production and intra-company sales; transfer pricing method has been chosen for each situation, and probable profit of the enterprise and RC has been calculated. Relationships between two responsibility centres, RC1 and RC2, have been analysed. RC1 transfers the intermediate product to RC2 that uses the product as a raw material in further production process. Product similar to the intermediate product may be procured from the market, with little difference between their quality and properties. Market price is available and subject to minor variations. RC1 product may, in turn, be sold on the external market, and the enterprise trades in it in fairly small amounts. The enterprise does not make any investments into RC and does not provide for any managerial pays to RC managers. Results of the research are presented in the Table (Table 1).

Situation I implies that trade in the product produced by RC1 is intra-company only. RCs communicate with each other, monitor the market situation. The transfer price chosen ensures profitability of operations by both the RC and the entire enterprise: $\Pi = \Pi_1 + \Pi_2$.

Situation II differs in that RC1 has earned profit both from intra-company trade (Π_1V) and from sales on the external market (Π_1I). Results of the analysis have suggested that the enterprise benefits from this kind of trade. This situation fits limitation $kH \leq TPHH \leq dH$.

In case III, only intra-company trade is conducted, but cost-based method is used to determine the transfer price. In this case, transfer price is considerably lower, but fails to fit limitation $kL \leq TPLL \leq dL$ with respect to RC1, i.e. trade by RC1 is loss-making.

In case cost plus transfer pricing method is chosen (situation III), RC1 operations become profitable, but not favourable to the enterprise, as profit of the latter is limited by the size of profit of RC2: $\Pi = \Pi_2$.

Situation IV implies application of negotiated transfer price method, where the size of transfer price depends on the RC managers' negotiation skills. In this case, top management must apply limitation $p_1 \leq TP \leq p_2$. The limitation in the enterprise analysed is as follows: $16.20 \leq TP \leq 63.00$.

Table 1: Results of the Case Study on Transfer Pricing

Description of the situation chosen	Transfer price Eur/m ³	RC1 profit Π_1	RC2 profit Π_2	Enterprise profit Π
Transfer price is set under market-based method, when only intra-company trade is conducted	63.00	426 400	508 900	935 300

Transfer price is set under market-based method, when both intra-company trade and trade on the external market are conducted	63.00	489 400 including on the external market 63 000	508 900	998 300
Transfer price is set under cost-based method, when only intra-company trade is conducted	16.20	(95 400)	3 204 200	3 108 700
Transfer price is set under cost-plus method	27.20	27 200	908 000	908 000
Transfer price is set under negotiated price method	35.00	114 200	1 439 800	1 554 000

Source: authors' calculations

Analysis of the situations has suggested that RC1 benefits from transfer price calculation under market-based method, as the intermediate product cost is lower than the market price. RC2 would prioritise the cost-based method, where intra-company trade is conducted; in this case, however, operation decentralization principles of the enterprise would be violated. Top management must act diplomatically and apply negotiated price method in view of the limitation provided. Disagreements between RCs may otherwise affect profitability of not only individual RCs, but also of the entire enterprise.

4. Conclusion

Transfer price used properly in a multicomponent enterprise should encourage RCs to undertake the solutions that are the most acceptable, profitable and beneficial to operations of the entire enterprise. The developed model for formation of a transfer pricing system integrates factors of internal and external environment, strategic goals of the enterprise and RC, and helps choose the most appropriate transfer pricing method. An enterprise may calculate transfer price under the following methods: market-based, cost-based, or negotiated price method. The transfer pricing method that would be beneficial to all RCs participating in the transaction(s) and the enterprise should be chosen at the enterprise. Choice of methods for calculation of transfer price depends on a number of factors: consistency between goals, autonomy, motivation, performance assessment. RCs under an enterprise cannot set transfer price absolutely independently, as it is the top management that defines the rules, criteria, and conditions. In case variations occur in internal or external environment, an enterprise cannot continue applying the same transfer pricing system. In this case, transfer pricing system may become an obstacle to market entry. In this case, situation analysis is the best method for choosing a transfer pricing method. During situation analysis, the method to be prioritised is determined, as different transfer pricing methods are chosen in different situations under different circumstances. Thorough analysis of situations at the chosen multicomponent enterprise has suggested that market-based and negotiated price methods are more favourable for RC1 supplying the intermediate product, as they may help generate greater profit. Transfer pricing under cost-based or negotiated price methods is more favourable for RC2 purchasing the intermediate product from RC1. Top management should perform control over RCs in order to ensure that their operations lead to the goals set by the enterprise.

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Selected problems of planning in the Enterprises in the Slovak Republic

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Abstract

The paper deals with the topic of planning in Slovak enterprises. It evaluates the impact of the size of organisation, foreign ownership and work position on selected problems (the methods of planning used for estimation of the future need of employees; further education and development of employees and fairness of assessment system of employee performance). The number of evaluated enterprises was 1221. The non-parametric methods were used for evaluation of the impact of selected factors.

The results confirmed the type of used planning methods depends on the size of organisation and the perception of fairness of assessment system is influenced by the work position of respondent. The impact of foreign ownership on further development and education of employees was not confirmed.

Keywords: planning, size of organisation, foreign ownership, work position

JEL classification: M10, M11, M19

1. Introduction

The planning in Slovak enterprises is influenced by the turbulent development of the business environment ever since 1989. There were numerous capital amends of Labour Code, there were changes of tax rates and taxing system in general, there is public finance consolidation ongoing, etc.). There is also a historical context (the central planning ceased to exist in 1989 and a lot of starting entrepreneurs were lacking experience in planning since they did not need to plan by themselves in the past) which influenced and is influencing still the way of planning in many enterprises.

The planning deals with many problems: operations (Brennan et al., 1994; Nozick and Morlock, 1997; Hulthén et al., 2016), human resources (Haddock-Millar et al., 2016; Pride and Tatenda, 2016; Waheed et al., 2016), finance (Church et al., 2017; Morgan et al., 2016; Weisbrod and Duncan, 2016). We focused on the areas of a. methodology, b. development of employees and c. assessment.

2. Data and Methods

2.1 Data obtaining

The survey was performed from September 2012 to May 2016. There were 1221 valid questionnaires from randomly selected respondents working in different business organizations. It is representative with margin of error of 3.2 % and confidence level of 95 % (total number of companies in Slovak Republic was 569372 in 2014).

Apart from the introductory classification items (legal form, number of employees, proportion of foreign capital, field of activities, work position of the respondent and the company seat) the questionnaire contained items divided into seven topic areas: objectives, planning process, planning of marketing, production and stock planning, HR planning, financial and investments planning, control. These topics follow the areas that the planning in a company usually focuses on (Robbins & Coulter, 2012).

The majority of questionnaire items were scaled from 1 to 7 (the Likert-type scale). Value 1 corresponded to the absolute disagreement of the respondent with the statement in the wording of the item (formulated as a positive statement), whilst value 7 corresponded to the absolute agreement of the respondent. Since all of the items were marked as “mandatory”, the added value 8 enabled respondent not to comment on a given item.

2.2 Statistical methods

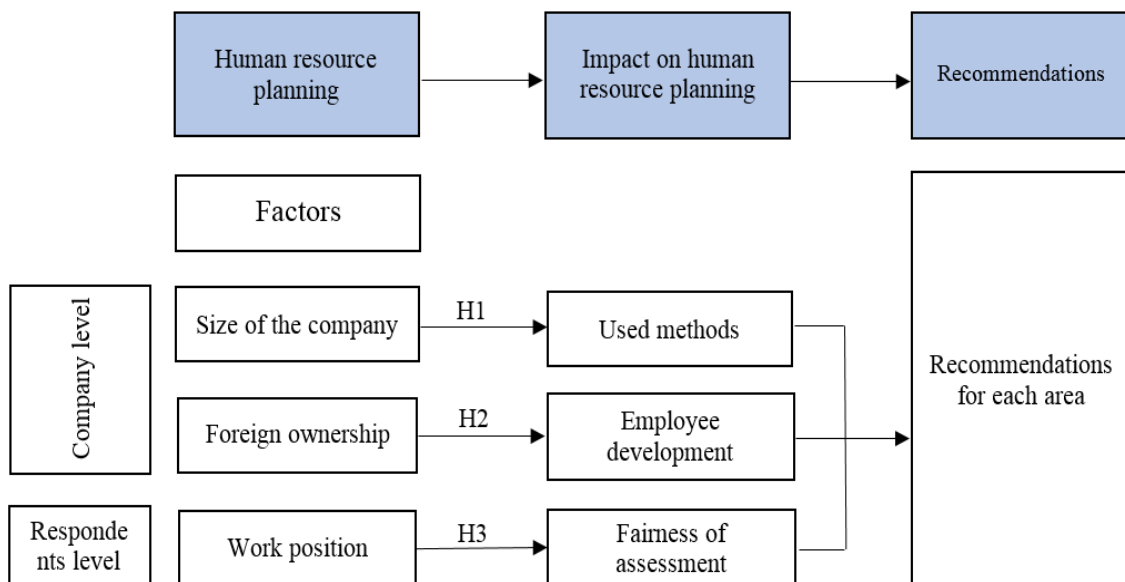
The reliability of the questionnaire was verified by means of Cronbach’s alpha ($\alpha=0.863$). The method of split-half measurement instrument was used as the second method of verifying the reliability ($\alpha=0.855$). With regard to the achieved results it is therefore possible to regard the reliability of the measurement instrument as sufficient. The construct validity was verified by means of factor analysis using the varimax rotation of factors. Varimax rotation of factors is an orthogonal method of rotation that minimises the number of variables with high loadings on a factor, thereby enhancing the interpretability of the factors (Malhotra & Birks, 2006).

The suitability of applying the factor analysis was verified on the basis of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO test) and Bartlett’s test of sphericity. The condition of the minimum number of respondents (150) was met. The results of both testing statistical methods were satisfactory (Bartlett’s test: $p < 0.05$; KMO test > 0.7 , the value reached was 0.882). The assumptions of applying the factor analysis were met. The factor analysis identified four background factors which altogether explained almost 70% of the total variance (69.4%). Based on the fact the identified factors fully correspond with questionnaire’s content, we regard the construction validity of the measurement instrument satisfactory.

2.3 Research design

The research design is as follows:

Figure 1: Research design



Source: Own Processing

The variables were operationalised as follows

Table 1: Operationalisation of the variables

Variable	Operationalization	Measurement
Size of the company	What is the number of employees of the company you are working for?	4 categories: 1 - 1-10; 2 - 11-50; 3 - 51-250; 4 - over 250
The share of the foreign capital in the ownership structure of the company	What is the share of the foreign capital in the ownership structure of the company you are working for?	6 categories: 1 - 0%; 2 - 1% - 20%; 3 - 21% - 40%; 4 - 41% - 60%; 5 - 61% - 80%; 6 - over 80%
Position in the company	What is your position in the company you work for?	2 categories: 1-manager; 2-worker
The use of the qualitative methods	Qualitative methods are more used for determination of needed employees.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
The use of quantitative methods	Quantitative methods are more used for determination of needed employees.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
Development and training of employees	Employee development and training is a part of the human resource planning.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
Fairness of the employee assessment system	The assessment and reward system of employees is fair.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion.

Source: Own Processing

2.4 Hypotheses

There is body of literature dealing with topic of future need of employees (Ross, 2015), the impact of foreign ownership on employee development methods (Chebeň et al., 2014; Xue, 2015) and perception of fairness of employee performance assessment systems (Lančarič et al., 2014; Preizer 2014). Based on previous studies we developed this set of hypotheses:

H1: The methods of assessment of the future need of employees are influenced by the size of organisation.

H2: The further education and development of employees is more of the concern in foreign owned organisation.

H3: The perception of fairness of employee performance assessment system differs with respect to work position.

3. Results and Discussion

3.1 Sample characteristics

The sample structure regarding the size of the organisation (number of employees) is divided into size categories relatively evenly. Each size category is represented approximately by the quarter of the sample. The majority of the enterprises is domestic (55%), the rest is partially owned by the foreign entity. The highest share of the foreign capital in the ownership structure (over 81%) can be found in 14% of the sample organisations. Considering the work position of the respondents, 33% are managers, the rest are not managers.

Table 2: Sample characteristics

Number of Employees	v %	Foreign Capital	v %	Work Position	v %
10 or less	25.1	0%	55	manager	33.4
11 to 50	29.7	0.1%-20%	9.5	no manager	66.6
51 to 250	23.1	21%-40%	8.8		
over 251	22.1	41%-60%	8.7		
		61%-80%	4.3		
		over 81%	13.6		
Total	100	total	100	total	100

Source: Own Processing

3.2 Hypotheses testing

Since the assumption of normality was violated, we used non-parametric methods (Kruskal-Wallis test and Mann-Whitney Test).

The results show, that the size of the organisation has an impact on the type of methods used for assessment of the future need of employees (table 3). The larger the organisation, the more quantitative the approach (table 4, table 5).

Table 3: Kruskal-Wallis test result (H1)

	The future need of employees is assessed using intuitive methods
p level	0.000

Source: Own Processing; *note: the grouping variable was the size of the organisation*
Table 4: Post hoc test results (H1)

The future need of employees is assessed using intuitive methods		Mean Difference	St. Dev. Error	Sig.	Significance level 95%	
					Lower Bound	Upper Bound
10 or less	11 to 50	-0.500*	0.170	0.017	-0.94	-0.06
	51 to 250	-0.844*	0.182	0.000	-1.31	-0.38
	over 251	-1.394*	0.184	0.000	-1.87	-0.92
11 to 50	10 or less	0.500*	0.170	0.017	0.06	0.94
	51 to 250	-0.344	0.177	0.209	-0.80	0.11
	over 251	-0.894*	0.179	0.000	-1.35	-0.43
51 to 250	10 or less	0.844*	0.182	0.000	0.38	1.31
	11 to 50	0.344	0.177	0.209	-0.11	0.80
	over 251	-0.550*	0.191	0.021	-1.04	-0.06
over 251	10 or less	1.394*	0.184	0.000	0.92	1.87
	11 to 50	0.894*	0.179	0.000	0.43	1.35
	51 to 250	0.550*	0.191	0.021	0.06	1.04

Source: Own Processing

Table 5: Subsets (H1)

Number of employees	N	Subset for alfa = 0.05		
		1	2	3
10 or less	273	3.19		
11 to 50	314		3.69	
51 to 250	236		4.04	
over 251	226			4.59
Sig.		1.000	0.226	1.000

Source: Own Processing

Based on results we conclude, that the foreign ownership does not affect further education and development of employees in Slovak enterprises. Our assumption that the foreign owned enterprises are more inclined to further educate and develop the work force was not confirmed (table 6).

Table 6: Kruskal-Wallis test result (H2)

	The HR planning is dealing with further education and developmnet of employees
p level	0.092

Source: Own Processing

We assumed the managers will perceive the performance assessment system more positively when compared to not-managers, which was confirmed by the research results (table 7).

Table 7: Kruskal-Wallis test result (H3)

	The employee performance assesment system is fair
p level	0.000

Source: Own Processing

3.3 Discussion

The first evaluated factor was the size of the organisation. We evaluated its impact on the type of methods used by the assessment of the number of employees needed. The intuitive approach is used in the micro companies, while in large companies the quantitative methods are used. This result is in line with previous studies (Ross, 2015).

However, our results regarding the influence of foreign ownership and its impact on education activities differ from the previous results. Both McDonell et al. (2010) and Xue (2015) found the foreign capital has a positive effect on the number of education and development activities in the companies. In Slovak Republic this phenomenon was not confirmed.

We evaluated the perception of fairness of employee performance assessment system based on the work position of respondents. The results show managers consider the assessment systems to be more fair when compared to not-managers. This result is in line with those of Frimpomaa, 2014 and Jewoola, 2014.

4. Conclusions

The results confirmed the type of used planning methods depends on the size of organisation and the perception of fairness of assessment system is influenced by the work position of respondent. The impact of foreign ownership on further development and education of employees was not confirmed.

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Analysis of the relations between the reputation of the contractors and the operative competencies of the construction sector

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Abstract

During the analysis presented in the current research, the author explored the aspects influencing the individual contractors in their choice of professionals, and what further groups the consumer preferences constitute in the heads of the consumers. The results of the research show that already in Hungary too, the selection criteria in the system of consumer preferences takes into consideration the operative competencies of the contractors, their reputation, the motives for the investment and the technical feasibility of the investment. These new sets of criteria improve the profitability and the feasibility of the investments, and thus represents an effective solution in the applicability of the project management tools (Lazányi 2013, Lazányi 2014, Zéman – Gábor 2012).

The research analyses the risks behind the investment reasons. We analyzed in detail the factors the customers are interested in and the preferences they make during the selection process. The importance they have and to what extent they influence the respondents in the sample in the decision-making.

Key words: investment preferences, consumer behaviour, perceived investment consumer-service provider risks, project management tools

JEL Classification: J01, M20, M50

1. Introduction

Any changes in the economic environment have impact on the investment habits. In Hungary, since the political transition in the 1990s, foreign and domestic investments have faced different problems, because of the unfavourable circumstances and the unpredictable changes in the environment (Zdenkó – Illés – Komáromi 2000). The situation have considerably changed until our time, but the economic crisis has brought several new problems for the investors, which has led to the decrease of their motivations and commitment (Illés – Hurta–Dunay 2015).

This process is well demonstrated comparing the trends during the first quarter of 2013 and the second quarter of 2014 in Hungary, during which period - compared with the same period of the previous year – the housing prices increased, the growth rate both in nominal and real terms approached the 1.4%. Domestic economic actors - due to the low central bank interest rates – were in the position to obtain loans with favourable conditions, which further stimulated their intentions to invest, the future positive economic prospects and the low interest rates tend to drive the market players to invest their savings rather than to save based on the minimal yield offered by the banking sector (Lukács – Zéman 2014, Zéman – Gábor 2012). The various state programs can also have significant impact on the investments. The previously mentioned conditions equally play a role in the trend that only in a small proportion of investments is characterized by the exclusivity of own resources in the investments, in most of the cases the developments are carried out using a mixture of financial sources. This means that the economic actors build mostly on loans from the state and EU funds, besides their own contributions (Almádi 2016, Maohua – Zéman – Almádi 2016, Máté – Almádi 2016). The housing “rally” started in the first quarter of 2014, since then a constant increase can be observed in the development of residential property’s prices.

This trend is further confirmed by the statistics of the third quarter of 2014 on the construction of new apartments and the issuing of construction permits, in both categories (construction of new apartments and the issuing of construction permits), a growth of 30% can be seen in comparison to the same period of 2013. These favourable trends can be observed by the increasing number of real estate purchases. According to the Hungarian Central Statistical Office (KSH) the predicted turnover in that year showed a 10-15% growth.

The housing index survey of the FHB Land Credit and Mortgage Bank Company (The FHB Apartment Price Index measures the changes in the prices of the Hungarian retail real estate market. The index is quarterly, starting from the first quarter of 1998.) shows that the index in the fourth quarter of 2014 the index was valued at 169,21, and it gradually increased by the first quarter of 2015 (the rate of change is almost 9.34% which is quite remarkable). In the fourth quarter of 2015 the index continued to grow and it achieved the value of 199.93, which represent a 9% increase annually in the case of property prices.

The latest value of the above-mentioned index is 215,06 (for the first quarter of 2016), showing a slow rate of further increase concerning the real estate prices. However, it is also clear that a decrease in housing pricing cannot be expected, on the contrary: higher prices are predicted for the near future. The growth and the prosperity on a regional level in Hungary is highly varied, the most stable real estate sub-market being the Western Hungarian one, where a permanent price increase can be seen (according to the already quoted FHB House index).

From an economic point of view, it remains a question how long the small demand can follow the high prices of the properties, but at present it seems that the consumers follow the prices dictated by the market (Csiszárík-Kocsir – Fodor – Medve2013, Csiszárík-Kocsir – Fodor – Medve 2014). In any case, those who bought properties at low prices during the economic crisis, or even at the beginning of 2014, can realize a significant profit if they decide to sell their properties in the near future (FHB Lakásindex, 2015).

2. Data and Methods

The research presented in this study consists of several changes, and we are going to present one of the last stages. As an antecedent of our qualitative research on the sample number N=428, in 2015 we conducted a quantitative research, in which we made several interviews with experts, and analysed them with the help of a conventional content analysis method.

The recruiting of qualitative subjects involved the following elements: professionals dealing with, directing, managing, coordinating projects, experts, project managers or coordinators. Another important sorting criteria was that the subjects operate in different sectors, so that using this approach the different aspects of examination could be compared.

Thereby we involved experts in our research who helped to enrich the standardized questionnaire adding the perspectives and the points of view of the designers, constructors and technical inspectors.

The question was whether there are resolution mechanisms that could be adapted independently from the projects. And if so, what are the steps that are transferable to the standardized processes?

The previous results of the data processing confirmed that regional differences in the investment project mechanism can be detected in Hungary. It is possible to minimize these regional differences and recognize generally applicable elements. The primary research consisted of a qualitative and a quantitative phase.

Based on the results of our qualitative research, the quantitative research aimed to answer the following main issues:

Q1: Based to the result of the qualitative research we identified, - the characteristics of the investment decisions- the dimensions (emphasizing the value of services, the security of the investment, the return on investment, the expertise and reliability) and also how the domestic consumers perceive those aspects?

Q2: Based on the answers provided by the sample group, various group values were constructed, and the question was how they reflect the revealed dimensions from the preliminary qualitative research?

Q3: Alongside which value-added dimensions can the consumers isolate the preferences characterizing the investment decision?

Q4: Whether among the different consumer segments detected during the examination there can be a "migrant element", which carries the characteristics of the consumer-client decisions and if so, will it fit into other clusters?

3. Results and Discussion

Based on the quantitative research results, we prepared a list composed of 16 factors statements which we applied in the segmentation of the value-based decision-making criteria of the domestic consumers. In our questionnaire, we distinguished the following five groups of factors: the value of service, the safety of investment, the return on investment, the expertise and reliability.

In our research, we describe the achieved intermediate results reached by applying a non-representative sampling between the period August 2015 and 2016 April.

The semi-structured interview scheme covered and examined the following groups of questions:

Exploring the main elements of the investments in housing, and their criteria;

The preparation of the investments (for example: time, cost, quality, design);

The realisation of investment planning (for example: key elements, designer-client relationship, perceived risks);

The evaluation of investment (for example: realisation compared to the planning, own experiences);

The qualitative study showed the following results from the aspect of expert selection

Among the participants of the projects, a cooperation risk is detected, which vary in the case of construction products;

During projects the risk reduction role of the social channels appear;

Within the preference system of the service selection the following aspects appear:

The contractor's (operational) competence,

The reliability, the reputation (as a trust factor) of the expert,

The criteria system of those who look at the motives of the investment,

During the selection of the experts, the monitoring factor of the expert feasibility of the project.

The quantitative research was conducted during the period between May 2016 and September 2016 in the framework of personal interviews with non-representative sampling, with the help

of a pre-tested standardized questionnaire. The results of the first 50 test interviews showed that certain questions are not so clear therefore, in a later phase some questions were modified, based on the feedbacks.

The analysis was made by the SPSS15 software program. Thanks to the successful data recording we received 428 questionnaires: 43% of the respondents were male and 57% were female.

Among the respondents, the youth (18-25-year-olds) were represented in the highest proportion with 37%, they were followed by the group of 26-35-year-olds with 23%, with the 34-41-year-olds with 17% and not far behind them there is the group of people whose age is between 42-49 years with 14%. The proportion of those whose age is over 58 is only 9%.

The distribution of the sample by educational qualification is equal among participants with a higher or mid-level education. The majority of the respondents have high school degree (49%) they are followed by those who hold a degree of higher education (47%). The proportion of primary educated people is very small, it did not even reach the 4%.

Table 1:Service selection system of preferences

Service selection criteria	Average
The investment period (in which seasons the work take place)	2,56
The duration of the construction	3,06
The architect's flexibility for certain issues	3,29
The architect availability	3,34
The expert's autonomous problem solving skill	3,27
The expert's reliability	3,73
The expert's experience in the building industry	3,12
The range of services of the expert	2,87
The trust in the expert	3,71
The reputation of the architect's office	2,55
The accessibility of the architect's office	2,24
The service prices	3,53
Recommendations by friends	3,02
The expected return of investment	2,97
The segment of investment (purpose of the construction- business or housing)	2,62
The investment cover (whether the person has enough money to complete the works or not)	3,62

Source: own research, 2016. N=428

Note: (average, 1= does not influence me, 4= totally influence me)

The income distribution of the sample indicates that 13 % of the respondents are characterized by a net per capita income of up to 50 thousand HUF. More than 37% of the sample had a net per capita income of between 51 and 100 thousand HUF per month, followed by the respondents who had 101 and 150 thousand net per capita monthly (21%). Income between 151 thousand and 200 thousand HUF net per capita monthly represent 14% of the respondents and those

respondents who have more than 251 thousand HUF net per capita monthly is only 8%, and almost the same percentage of those whose net per capita income is between 201-250 thousand HUF (7%).

Among the respondents, the majority (75%) considered that recommendations by friends or acquaintances are important in the selection of an expert. This means that social channels are significant as a risk factor reduction (Csiszárík-Kocsir – Varga 2017). Regarding the selection of service provider, the expert's professional experiences, references and the confidence towards the service provider belongs to the important aspects.

Looking at the service provider selection's preference system, it is important to emphasize that the price of the service is just as a significant factor as the trust element according to the sample. This shows that in this target market case we can identify strong price sensitivity.

In a separate section we analysed the wide range of aspects relating to the construction and renovations of buildings. According to this, the period of investments and its duration largely affect the respondents.

The flexibility, the reliability, the individual problem solving skills and the accessibility of the architect/contractor are relevant aspects based on the research results.

This shows how important is the service provider's competences in the use of a such a confidential product.

Among the further important aspects are: the expected return on investment, the objective (business or housing) of the investment, and the fact whether the subject has enough money to complete the construction. All this once again highlights *the fact of cost sensitivity*.

4. Conclusion

Overall, the responses show that the customers of the service not only perceive but also avoid the investment risks by - as one method - requesting the recommendations and advice of friends and acquaintances. On the other hand, during the selection of professionals the most important aspects are the following: reliability and mutual trust. Naturally, the customers know and sense the financial risks as well, therefore before the investment starts they carefully consider the size of the investment, the amount of money for the total of the investment and also the price-value ratio of the services besides their actual price. Based on our research, we would suggest to take into consideration the following aspects when selecting professionals for a construction project: **Use of quality materials**, the better quality the materials used, the more expensive the project can be. **Completion bank guarantee**, the bigger the completion guarantee, the higher the price can be, and the construction project more valuable. **Flexibility with the start of the project**, the more flexible the starting date of the project, the higher the probability of the completion by deadline. **Liability bank guarantee**, the higher the bank guarantee, the more secure the completion of the project. **Extra liability time (in years)**, the longer the extra liability time, the higher the probability of quality work by the contractors. **Penalties for delay (thousandth/day)**, the higher the penalty for delay, the higher the probability of completion by deadline. **Frequency of invoices (pieces of invoices)**, the shorter the time between invoices, the riskier the completion, potential of losing on interests. **Payment deadline (day)**, the longer the payment deadline, the longer the funds can be utilized. **Offered price (HUF plus VAT)**, the lower the offered price with the same content, the more funds remaining for further objectives.

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The Modern Marketing Communication in Tourism

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Abstract

Mass tourism, is an important contributor to the development not only of regional but also national economies and generally it's presented by tourism destination. Despite certain tendencies in preference for individual tourism, it is expected that mass tourism and mass tourism destination will continue to play a dominant role in future. The present paper is dedicated to the topic of possible usage of modern tools of marketing communication in management of mass tourism destination. Special characteristics of its product are having influence on the usage and effectiveness of traditional forms of marketing communication (advertising, exhibitions, etc.) in the presentation of mass tourism destination and on other hand the possible preference of using new modern trends of marketing communication.

The aim of this article is based on analysis of primary, secondary data and field observations to evaluate the possibility and key factors of usage of selected forms of modern tools of marketing communication like internet marketing, social media, mobile marketing and word of mouth marketing etc. The result will be the evaluation of usage of modern marketing communication and its current state of the application in propagation of mass tourism destinations including proposal of some recommendations for their next application.

Keywords: *Mass tourism, modern marketing communication tools, social media.*

JEL Classification: *M31, M37, L83*

1. Introduction

Mass tourism, which develops from the beginning of the 60s of the last century approximately, is an important contributor to the development not only of regional but also national economies and generally it's presented by tourism destination. Despite certain tendencies in preference for individual tourism, it is expected that mass tourism and mass tourism destination will continue to play a dominant role in a number of states whose economies are depending upon its growth and where the tourism is very often considered as tourism industry.

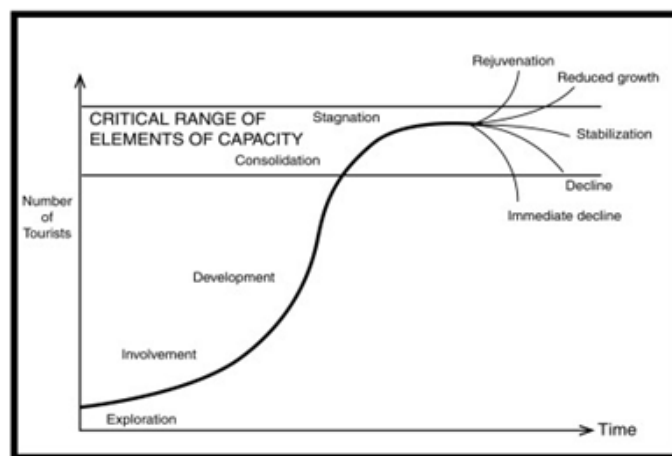
Because of the increasing competitiveness in the field of tourism the role of marketing communication as the basic tool of telling others that "we are here", no matter if it's the provider of tourism services, hospitality or holding sports or cultural events like Olympic games, musical festivals. That's why the topic the author will deal with is the possible usage of modern tools of marketing communication in management of mass tourism destination. Special characteristics of tourism product are having influence on the usage and effectiveness of traditional tools of marketing communication like advertising, exhibitions, etc. in the presentation of mass tourism destination and on other hand the possible preference of using new modern trends and tools of marketing communication.

1.1 Tools of Modern Marketing Communication in Tourism

Social media are gaining prominence as an element of destination marketing organisation (DMO) marketing strategy at a time when public sector cuts in their funding are requiring them to seek greater value in the way marketing budgets are spent. Social media offers DMOs with a tool to reach a global audience with limited resources. (Hays,Page,& Buhalis,2013). There are many ways how the marketing specialist working in the sector of tourism, better said in the

sector of massive tourist destination, could wake up the interest of potential visitors for visiting selected tourist destination. In the beginning of massive tourism in 60s' of last century the situation seemed to be very simple because the desire for traveling after the stabilization after The World War II was very high. Due to changes in technical, social and economical area the situation has changed radically. The number of tourist but also of tourist destination increased. This situation has changed a lot in last years when new destination has appeared that's why for many traditional massive tourist destinations the goal of catch new visitors is more and more difficult. The reasons leading to this fact are different, sometimes the destination has just reached the point of stagnation in the tourism lifecycle (Figure 1) and doesn't know how to face new challenges and grow up (the case of Costa Brava in Spain) or it's just the victim of turbulent social and political changes in selected areas, were before the tourism was the building stone of their economy (Egypt, Tunisia etc.).

Figure 1: Tourism Lifecycle



Source: BUTLER, 2006

One of the solution for problems mentioned above could be the use of the most appropriate tool of modern marketing communication. While choosing the “best” one, the consideration of following limiting facts (but not only them) is the must:

- The definition of tourism destination as a geographical area consisting of all the services and infrastructure necessary for the stay of a specific tourist or tourism segment. Destinations are the competitive units of incoming tourism. Destinations are therefore an important part of a tourism product. This fact could limit the selected tool of marketing communication because that one must respect the character of tourism destination.
- The base of tourism destination, besides its attractiveness, is providing tourism services and the peculiar characteristics of services like intangibility, immateriality etc. could be limiting for using some modern tools of marketing communication.
- The fact that the destination is based on massive tourism (usually wide spectrum of visitors with different preferences as for marketing communication) is also the limiting one.
- The world is getting „on-line”

Considering all this facts and characteristics of some traditional marketing communication tools like advertisement, personal sale, lobby, participation in fairs and exhibitions, sponsoring, sales promotion and especially some new ones like direct marketing, public relation, internet

marketing could lead to successful marketing communication of massive tourist destination (Foret, 2006).

In last years could be seen incredible evolution as for new tools of modern marketing communication that can be divided in to 4 groups the first one a called Fixed stars belonging to this group following types of communication: E-mailing, World of mouth, Local related search. Second group with QR codes, Micromarketing, HR branding is going to disappear and their use will go down. On the opposite side are standing Guerilla marketing, marketing automation, Real time marketing, Social commerce, Social customer relationship management these are the trends with the predicted success. Among the actual trends belongs the following tools of modern marketing communication: remarketing, social media, viral marketing, mobile commerce, video marketing among the others.

For further analysis and to reach the aim of present paper is needed to define some of above mentioned tools. The author will pay attention on World of mouth, QR codes, Real time marketing the main attention will be paid to social media marketing. These tools of marketing communication were choosen because were most frequently mentioned by respondents in the primary research.

World of mouth (WOM)

Word-of-Mouth Marketing (abbreviated WOM) marketing is focused on inducing effect of oral spread of "advertising" between customers themselves. Part of the marketing buzz. Generally WOM raise new, surprising or different topics. WOM can be positive or negative (Hennig-Thurau, Gwinner,., Walsh, & Gremler,2004).

QR codes (QRC)

In advertising and product communication very frequently used tool. They can refer to websites, coupons, and may also include a complete electronic business card. The smartphone and application is the must (Dou & Li, 2008).

Real time marketing (RTM)

Real Time Marketing is marketing that is based on up to date events. Instead of creating a marketing plan in advance and executing it according to a fixed schedule, real time marketing is creating a strategy focused on current, relevant trends and immediate feedback from customers. The goal of real time marketing is to connect consumers with the product or service that they need now, in the moment. (Kaplan, 2012)

Social media marketing (SMM)

Social media is one of the fastest growing communication technologies in the Internet environment as well as tourism marketing It refers to Internet-based online media in which individuals with common interests, goals, and practices engage in social interactions constructing personal profiles and sharing information and experiences. Social media represents a variety of forms such as social networks (e.g., Facebook), photo sharing sites (e.g., Flickr, Photobucket), video creating and sharing sites (e.g., YouTube, Ustream), online communities, microblogging tools (e.g., twitter), social tagging (e.g., Digg), newsreaders (Google Reader), public Internet boards and forums, review/rating websites (e.g., TripAdvisor), blogs/moblogs, tagging sites, podcasting, wikis, and individual websites. One of the most important functions of social media is that it provides a Web-based application in which users can easily create and post a variety of content in the forms of texts, photos, videos etc. (Kang & Schuett, 2013).

Social media itself is a catch-all term for sites that may provide radically different social actions. For instance, Twitter is a social site designed to let people share short messages or “updates” with others. Facebook, in contrast is a full-blown social networking site that allows sharing updates, photos, joining events and a variety of other activities (Persuit, 2014)

The advent of internet-based social media technologies has enabled travelers to quickly and conveniently share their travel experiences. Shared information on social media sites is recognized as an important information source which may influence travel decision making for potential travelers. Results showed that identification and internalization are critical determinants that positively increase actual travel-experience sharing on social media as mediated by perceived enjoyment (Kavoura & Stavrianea, 2014).

2. Data and Methods

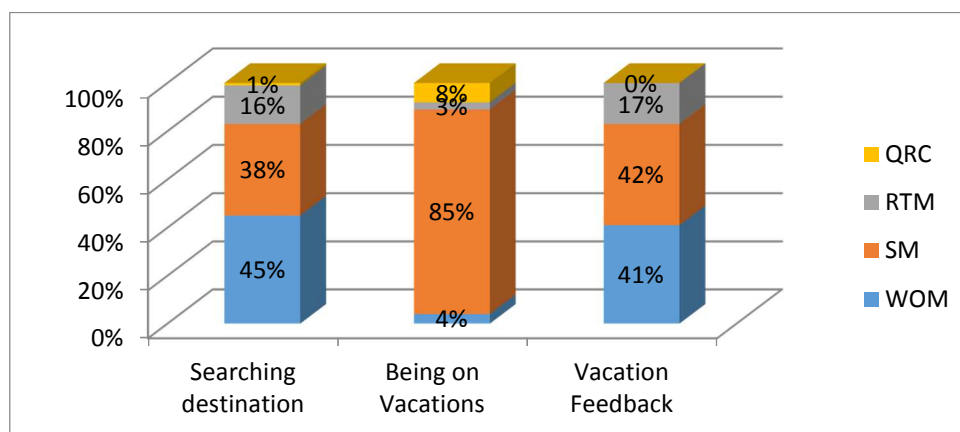
To reach the aim of this article the analysis of primary and secondary data and field observations was used to evaluate the effectiveness of selected modern marketing communication tools in the area of mass tourism destination. In order to create the following paper, the method of the literature search and expert articles have been applied. With the view of confirming the hypothesis, diagnostic mission methods have been used along with the vertical analysis of selected indicators, as well as the primary research method – the questionnaire survey was conducted among respondents. The quota selection has been applied. With the aim of creating the final part of the article, synthetic and deductive procedures have been applied too.

3. Results and Discussion

The results of the questionnaire research are the result of the survey, which was carried out in the period from November 2016 to January 2017. As a method for the realization of the research method the personal respondents were selected. The respondents were selected by the polling form of unrepresentative techniques appropriate to the occasion. The size was 450 of the respondents, of which 195 were women, 205 men. In terms of the geographic segmentation 60 respondents were from the region of Olomouc, 90 respondents from the Moravian-Silesian region, 45 from the Slovak Republic and 205 from the Bohemia region.

The aim of the survey was to obtain the attitude of respondents to selected tools of modern marketing communication while searching the destination for their vacation, sharing their experience on-line while being on vacations and presenting their opinion on just finished vacations. The results are presented in Figure 2 Results of survey.

Figure 2: Results of Survey



Source: author's research

Searching destination of vacation

Generally in the phase of searching destination for vacation the most evaluated tool to obtain information to make the best decision is World of mouth marketing. 45 % of respondents are considering this type of marketing communication as very useful having big influence on their decision making. The 38% of respondents are considering information that are available on social medias. About 16 % trust to information that were given them by real time marketing and only 1% of respondents are finding important facts through QR codes.

Being on vacations

Generally in the phase of searching information of destination, while being on vacation, the most evaluated tool to share experience is social media marketing – more than 85% of respondent reported that they are sharing their photos, videos, enjoyment through social medias (most frequently on Facebook). The QR codes are used for searching information when they are on vacations – about 8% of respondents beside sharing their experience on social medias are using QR codes. The real time marketing and world of mouth didn't reach significant rating in this phase of holidaymaking 4% respectively 3 %.

Vacation feedback

In this phase the most used tool to spread out our experiences is social media marketing sharing the position with world of mouth (42% resp. 41%).The rest 17% go to real time marketing. The QR code wasn't mentioned in any response.

4. Conclusion

The issue is very broad, and in the context of the next survey author should focus on other tools which are predict to be successful. The results of survey confirm that some tools with big expectations in the past like QR code is not used very frequently. On the other hand Social media marketing seems to be the best way for mass tourism destination to communicate with potential visitors. As for real time marketing it could be quite difficult to apply it, because the destination management authorities don't have very often databases of clients contacts to communicate with them. The world of mouth marketing and its usage in the area of tourism could be relatively counterproductive due to the characteristics of services they are offering, when some clients are having feeling that their vacations didn't met their expectations. This fact it's not often the fault of destination management. The article deals with just few of all modern marketing tools, for better evaluation of its effectiveness further survey dedicated to others modern marketing tools is required.

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Managing Quality in Project Management

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Abstract

Nowadays, in this competitive world is quality so important, that it cannot remain only in the hands of quality managers. Collaboration across the whole company in the field of quality is highly important because of the fact that by every successful organization stands its employees. Project management afford a comprehensive view of managing quality by reducing the costs of quality and increasing efficiency of the operations. The lack of quality in project management leads to the failure of the projects. In relation to this, quality should be present in every aspect of the project. According to the increasing character of project management and the current situation in the market, where customers are asking for higher quality is the primary objective of this paper identify the role of quality in project management. The whole paper focus on modern approach in managing project quality.

Keywords: *Quality, project management, project communication, project quality management,*

JEL Classification: *O21, O31, O32*

1. Introduction

The current continually changing conditions of world economic development impose high demands on managers, and the essence of quality management is also acquiring greater importance for each project company. The level of professional attention to this two board and apparently isolated areas of business management increased dramatically because of growing competition and complexity in the market. Quality management and as well project management grew rapidly, but largely without explicit awareness and use of their joint resources. Quality context, processes and tools are essential to project management success. In turn, project stages and activities are essential to implement quality management success. It is equally important to manage quality process within the project stages and to manage the project's impact on its external context (Kloppenborg *et al.*, 2002).

Within this context that quality must be managed and integrated into project management, the purpose of this paper is to explicitly link this two fields and strengthens their convergence as well as customising relatively new discipline - project quality management. In this paper, we reviewed the relationship between quality and project management, by case study, applied in selected project company.

To understand this modern approach in managing project quality, is necessary to understand the conceptual foundation of both quality management and project management.

1.1. Project and project management

The Project Management Institute- PMI (2008) has defined a project as temporary endeavour undertaken to create a unique product or service. This temporary nature of projects indicates a definite beginning and end. The unique is in that it is not a routine operation, but a specific set of operations designed to accomplish a singular goal. Duncan (1996) defines project management as the application of knowledge, skills, tools, and techniques to project activities

to meet the project requirements. Project management is the most efficient way of introducing unique change. (The Association for Project Management (APM), 2006).

Nowadays, project management is seen by Kerzner (2013) as applied systems management. Over the past several decades, more and more work has been accomplished in business through the use of projects and project management (Meredith *et al.*, 2016). However, despite of strong growth of knowledge in project management, projects continue to fail in terms of scope (i.e. specifications) and quality, in spite of the commonly used measures of cost and time (Thomas and Mengele, 2008). Quality has been a lower priority in project management as compared to time and budget (Grude, Turner and Wateridge, 1996). However, the primary objectives of project management – scope, time, cost and risk – are beginning to include quality as another parameter of objectives (Keegan, Anne, and J. Rodney Turner, 2002) and this is how “iron triangle” of cost, time and quality has emerged.

1.2. Quality and quality management

On the other hand, to define the term “quality” is more difficult. Evans- Lindsay (2016) said that quality can be confusing concept. At this time of the mistake intolerance, when supply exceeds over demand is quality motivating factor, which determine commercial success in the competitive markets. Companies operate in unstable and rapidly changing conditions, where customers specify the current market rules. Every customer perceives quality differently, what is high-quality for somebody, might be low-quality for another's. As a consequence of this fact, in this scientific paper we understand quality as meeting the needs of the customers (Kapsdorferová, Z., 2014).

Systematic assurance of quality in every phase of production process and in every moment of supply of services is necessary to understand as an integral part of management activities. Quality management system is planned and established by documenting procedures for the processes of organization to fulfill the needs and expectations of customers. The international standards, ISO 9001, specifies the requirements of Quality management system to consistently provide products that meet customer and applicable statutory and regulatory requirements (Natarajan, D., 2017). Quality management system is according to Kapsdorferová (2014) complex of subjective and objective characteristics, sources, organizational measures and responsibilities needed to activity realization ensure optimal course of all processes to achieve a maximum effect of sources, measures, processes and meeting the needs of the customers.

1.3. Project quality management

After we considered the basic concepts of quality and project management separately, is possible to define quite new discipline – Project Quality Management. Project quality management is a combination of these two relatively separated disciplines, which are closely linked together. In the development of managerial thinking, the principle of complexity of quality management and project management have been stressed in the context of this new phenomenon. Project Quality Management describes the process required to ensure that project will satisfy the needs for which it was undertaken. It includes all activities of the overall management function that determine the quality policy, objectives and responsibilities. Project Quality management consists of quality planning, quality assurance and quality control. These three processes interact between each other and with the processes in the other knowledge areas as well (PMBOK® Guide, 2014). The best way to understand the combined field of project quality management is to describe it as the sum of four pillars: (1) customer satisfaction, (2) process improvement, (3) fact-based management and

(4) empowered performance. Each of this pillar have to be strong to hold up the project (Kloppenborg *et al.*,2002).

Newton, P. (2015) stressed that still there are six possible reasons why quality standards might not be met despite everyone on the project team doing their best to deliver the project as specified:

1. The users were not asked to specify their requirements in sufficient detail
2. Not all of the user groups were asked
3. The requirements were not understood
4. They were understood but could not be achieved
5. The quality requirements changed during the project
6. The quality requirements were exceeded

Managing quality in projects is time-consuming and difficult. In order to obtain clarity in managing quality in project, is to implement some quality management system. One of the most frequently applied international quality management norm is the norm ISO 21500:2012 Guidance on project management.

This norm provides guidance for project management and can be used by any type of organization, including public, private or community organizations, and for any type of project, irrespective of complexity, size or duration.

ISO 21500:2012 provides high-level description of concepts and processes that are considered to form good practice in project management. Projects are placed in the context of programs and project portfolios, however, ISO 21500:2012 does not provide detailed guidance on the management of programs and project portfolios, but topics pertaining to general management are addressed only within the context of project management.

2. Data and Methods

The purpose of this paper is to establish the key role of quality in the project management and highlight the importance of implementing quality management system to deliver the success criteria of a project. In order to achieve the set goals, all data were acquired by a mixed methodology of case studies and semi-structured interview with the main coordinator of the project managers in selected project management company, which operates on the global markets, since 2003. The company was selected due to the fact that doesn't have official certificate for quality management system.

The survey was undertaken in mid-February, 2017. This kind of methodology was chosen because of the fact that interviewer is able to follow topical trajectories in the conversation, so it is possible to obtain more data from respondent contrary of the normal questionnaire survey.

The semi-structured interview was preceded by informal observation and unstructured interviewing with the respondent, in order to develop a keen understanding of the topic of interest necessary for developing relevant and meaningful semi-structured questions. In the interview, was used open-ended questions as well as yes-no questions. The inclusion of open-ended questions provides the opportunity for identifying new ways of seeing and understanding the topic at hand. On the other hand, yes- no questions are easier and more quickly to answer and improves consistency of responses. Overall, by using yes-no questions there are fewer irrelevant or confused answers to sensitive questions.

The main goal of this research paper was to identify the strengths and weaknesses of the implementation of quality management systems in projects management in the stable and well-established project management company.

In order to recognize the use of quality management system in the company, the interview was divided into four main categories. The list of questions and topics that needed to be covered during the conversation, were set in particular order to obtain comprehensive view of the managing quality in projects.

The first part of the interview was targeting on quality in project. This part is the most important part of the interview because it is generally known, that the term “quality” is multidimensional phenomenon and each person can understand it differently. It is necessary to understand, what quality means to the company. The main aim of this part was to ascertain the company’s view of the quality. The most frequently quality is understood as meeting the needs of the customers and stakeholders. In general, quality in projects is something what will satisfy the needs for which it was undertaken.

The second part of the interview concentrates on whether company implemented a quality management system into each project and whether company benefits by this implementation. Implementation of the quality management system does not include only the introduction of appropriate systems, processes, methods and techniques into the organization is also an issue that is a part of global cultural changes in the organization.

The third part of the interview focused on the reasons for implementing quality management system into the projects. The first pillar of the project quality management is customer satisfaction. More and more companies realized that currently, it is a customer, who specify the actual market rules, so companies putting maximum effort into achieving satisfied customers by implementing quality management system.

Taking into consideration that ISO standard provides a comprehensive guidance on the principles, scope and implementation of quality management system is certification as a competitive factor in current unstable markets covered in the last part of the interview.

3. Results and Discussion

The results of the research indicate that the company see the quality as meeting the needs of customers and stakeholders. In more detail for the company, quality in the project usually implies the supplying of facilities and services on time and within budget. Such facilities and services must conform to the project scope and specifications and must be fit for their purpose, as defined in the contract. In the connection with the project management, quality should be decided by end-user rather than by company, which realizes the project. Based on the experiences company can advise but customer should always have the last word in context of quality.

Based on the acquired data, managers of the company are aware, of importance of implementing quality management system into the projects. The company stated that managing quality in project cannot be a separate, independent process that occurs at the end of an activity to measure the level of quality of the output. Quality management in project management includes creating and following policies and procedures in order to ensure that a project meets the defined needs it was intended to meet from the customer’s perspective.

Quality management includes the processes and activities of the performing organization that determine quality policies, objectives and responsibilities, so that project will satisfy the needs for which it was undertaken.

A critical aspect of quality management in the project context is the necessity to turn implied needs into stated needs through project scope management. The project management team must be careful not to confuse quality with grade. Even though everyone in the project team doing

their best to deliver the project, quality standards might not be met with requirements. On the other hand, every project company should plan the quality and prepare a company environment that doesn't create defects. Achieving an aim by using quality managements system focusing on defects and their subsequent correction is not effective. The role of quality management is to make sure that project meets the needs for which it was created and provide satisfaction of the customers resulting from the realization of the project.

At this time of mistake intolerance and in connection to the customer satisfaction, is successful business determined by the number of customers. Each customer is for the company highly important. In project management companies is the satisfaction of the customers and stakeholders one of the major requirements to ensure the success of any future company's activities. In general, satisfied customer is a key issue to better business performance for each company, because satisfied customer leads to higher economic returns. The customers will decide whether to choose the same company for the realization another project firstly following their own experience or experience of their friends and of course how they were satisfied with the work, which was done by the company. Customer satisfaction is reflected by the experience and expectation and it is possible to state that is the most important project metric. The project manager's role is ensuring that customer satisfaction is guaranteed in every aspect of the project.

Naturally, project have to be successful, so it means that project meets business requirements, is delivered on time and within the budget and the expected business value and return on investment is as well delivered.

Company stressed that certification might be a factor in deciding whether company will be hired for a project or not. Company as well agree with the fact, that certification is not just the piece of paper for potential clients. It shows what methodology company uses and whether company have studied these methodologies more formally.

On the other hand, there are some top-notch project management companies out there, which don't have any certification or formal studies and are highly successful in this unstable competitive market. Certifications aren't indicators of smartness, or creativity, or dedication of a project manager, it is simply way of demonstrating that he has taken some time to study formal school of project management methodologies in the context of quality. Certification is something, what company wants to do or may not. Developing this level of quality management in project management companies is about showing your potential clients, what they can expect as the project proceeds.

The biggest challenge in the implementation of the official standard of quality management system is: processing the documentation. From the company perspective, dealing with the huge amount of paper work could cause loss of time, which could be used more effectively. It is very difficult to determine the total time for the implementation of quality management standard in a company. It definitely is a long-term lifelong activity regarding all specific aspects of the company.

The best solution for the company, which decides for certification is to hire a special person, who will ensure about all necessary aspect of implementation of the standards. The other employees can focus on their tasks and use the whole energy just to deliver the successful project.

In addition of certification, company has to amass a fair bit of on-the-job experience, because company will not be completely successful at minimizing risk in the projects without having these experiences. It is important to remember that no methodology will tell you how to run

projects, but at best company will have some techniques and concepts that provide a framework for what company wants to accomplish.

4. Conclusion

The instability of markets has become ideal business environment for those who were prepared. Well-prepared businesses have found new business opportunities in managing quality in projects. Many projects companies state the fact that quality shouldn't be treated as separated area, it should be presented in every aspect of the project. The project management techniques could be used to plan and manage quality improvement projects and quality is one of the essential knowledge areas for project managers. Regarding of this fact an increasing number of project companies all over the world have been implementing quality management system into their project management, in order to improve the quality of their processes and to witness the related benefits of this two closely linked fields.

In some situations, a quality standard might not be obvious, so the reason for an implementation of quality management system in project management can vary. It can be the increase of management effectiveness profitability growth, cost reduction, competition pressure, acquirement of a stable market position, increase of need for complex management system, satisfaction of requirements of more demanding customers, or in the context of project quality management it can be the fulfilment that project will satisfy the needs for which it was undertaken.

Top project management companies in the Slovak Republic are aware, of importance of the implementing quality management systems in to their project managements that is the reason why we can observe an increasing trend of introduction of project quality management in the Slovak Republic. Implementing quality management into the project management will help to expand what company do and as well how company do it.

On the basis of the achieved results it could be stated that quality management complements project management and both of these disciplines recognize the importance of customer satisfaction and prevention over inspection. Prevention over inspection means that quality is planned, designed and built in rather than inspected in. In general, the cost of preventing mistakes is usually much less than the cost of correcting them. Quality management like every other aspect of the project management, should be proactive. It is not possible limiting the quality management just to detecting defects in projects and then just correct them.

Every project management company needs to decide what quality means for the particular project. It is not possible to specify "general quality" in project because every project is unique and needs special approach.

In conclusion, our recommendation is to certificate the company with the international quality management norm ISO 21500:2012 Guidance in project management because at this time, when innovations need to be innovated the project managers should also be aware that modern quality management complements modern project management.

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The Development of Libyan Tourism

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Abstract

The situation in Libya is fragile and explosive, lacking political and socio-cultural stability. Regime change cannot be effective without a long-term strategy of national solidarity, democratization, social development and economic growth.

According to the World Travel & Tourism Council Tourism 's impact on the economic and social development of the country can be enormous, opening it up for business, trade and capital investment, creating jobs and entrepreneurialism for workforce and protecting heritage and cultural values (Scowsill, 2015). Tourism needs political stability, peace, security. The tourism is like no other economic sectors challenged by negative events. Incidence that has taken place had economic consequences. It is important to analyse these events to identify critical success factors and to integrate them into strategy. In this paper we try to analyse the characteristics of crisis and give recommendations how to develop Libya's tourism industry in/after these critical ages.

Keywords: tourism, development, crisis, strategy, cooperation, communication

JEL Classification: R58, R59

1. Introduction

Tourism is one of the most promising sectors in terms of development. International tourist arrivals grew by 5% in 2013, reaching a record 1.087 million. Total export earnings generated by international tourism in 2014 reached 1.5 trillion USD. Europe participates with 41% of all international tourism receipts and the increase was 14 billion USD, the second was Asia and the Pacific was the second with 30% share and with 16 billion USD increase, Americas had 22% share and 10 billion USD increase, the Middle East had 4% share and 4 billion increase. In 2014, Africa attracted over 56 million tourists, 5% of the total tourist movement of that year (Alammari, Khalif, Othman, 2015).

UNWTO Tourism Highlights 2015 Edition reports that the region receives only a 3% share in tourism receipts and 1 billion increases.

Tourism is one of the key industries driving the change in Libya and it provides multiple opportunities for economic growth and improved livelihoods. Among the reasons to develop tourism we can find the creation of jobs, economic development, improvement of infrastructure, increasing domestic consumption and export diversification, cultural heritage and environmental preservation, empowerment of women and marginalized people, among others (Affiliate Members Regional Reports, Volume 4 – Tourism in Africa: A Tool for Development, 2015, pp.12).

Nowadays tourism is normal part of our daily life. The positive effects of tourism are varied. For tourists a holiday means satisfaction as travel gives them the opportunity to bring their hopes and dreams to life. The tourism industry has achieved a leading position that it counts one of the most important sources of income and foreign exchange. However, the positive development of the tourism industry is being threatened by negative events. Incidents have taken place, and had economic consequences (Glaesser, 2006).

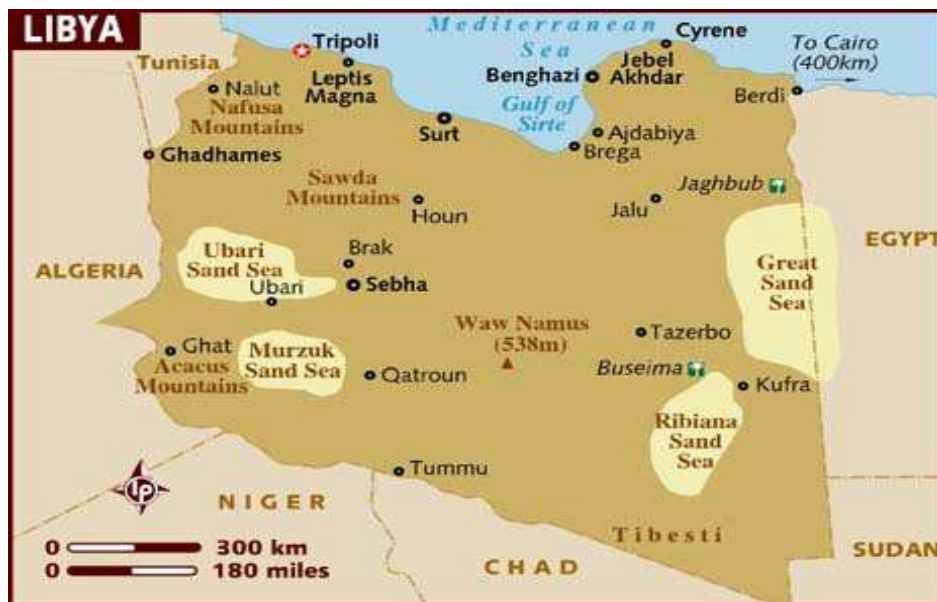
The tourism industry in Libya recorded a decline of 40% in the number of visitors compared to the previous years. Investors are anxious about the political and social situation in the country as violence and strikes have been very common since the revolution (Tafastrack, 2011).

The aim of this paper is to give a summary and recommendations how to start developing the tourism in a country where the situation is critical now, but before 2011, they had flourishing internal and domestic tourism.

2. A brief look at Libya

Libya stretches along the northeast coast of Africa between Tunisia and Algeria on the west and Egypt on the east, to the south are Sudan, Chad, and Niger. It is one-sixth larger than Alaska. Much of the country lies within the Sahara. Libya is rich in cultural heritage, numerous archeological and historical sites, and long Mediterranean coastline of sandy beaches.

Figure 1: Libya profile



Source: own construction based on www.worldpress.org

Libya, after gaining independence in 1951, was started getting more attention by the foreign investors for 30 years but after the uprising on 17th of February, 2011 everything has changed. It has been reported that Gadhafi's armed forces has killed over 50.000 civilians since the beginning the turmoil in the country.

However, Libya's political and economic weaknesses resulted in uprising and political stability in the whole country.

Libya has recently suffered from unemployment, and the corruption grew significantly during the last years.

Consequently, the destination image of the country, which is important of the decision making of a potential tourist, was significantly damaged.

In 2014, Libya's travel and tourism direct contribution to GDP was 2,2 US\$bn, (world average is 19,4 US\$bn), means 77 position in country ranking.

Table 1: Major macroeconomic indicators

Major macroeconomic indicators	2014	2015	2016	2017
GDP growth (%)	-47.7	-7.3	-4.4	53.7
Inflation (yearly average) (%)	2.8	14.1	14.2	12.5
Budget balance (% GDP)	-40.3	-52.5	-56.6	-43.8
Current account balance (% GDP)	-27.8	-42.1	-47.4	-36.9
Public debt (% GDP)	36.4	73.8	101.8	100.2

Source: Own construction based on WTO

The following Table 2 summarizes the touristic potentials and their barriers. Weighting the points we are very much concerned that security will bring prosperity in the country. Security and democracy should work together in order to fulfil the general wish of Libyan people: to live in independent, socially satisfied, well organized and well managed, economically successful in the world well-respected, highly estimated country.

Table 2: SWOT analysis of Libyan touristic potentials

Strengths	Weakness
<ul style="list-style-type: none"> - Part of Mediterranean culture - Beautiful nature (1900 km cost-line, untouched deserts, unique desert and oasis cultures, natural attractions) - Many archaic, historic and cultural heritages of more than ten thousand years - Five cites on UNESCO World Heritage list - Government's policy is for diversification of the economy – one priority can definitely be tourism sector - Close to Europe, close to the potential market - Very good road, sea-port and airport infrastructure in the whole country linking the cities and smaller settlements - English is widely spoken - Strong influence of Italian tradition in food 	<ul style="list-style-type: none"> - Most focus on oil - Not enough managerial knowledge - Lack of tourism infrastructure - Lack of quality accommodation - Bureaucratic barriers for FDI, - No detailed tourism strategy of state and no regulatory frameworks - Lack of managerial knowledge/skills - No well-trained human resource in tourism sector - Still bad international image of Libya - Few information about Libyan tourism opportunities - Public utilities are not working continuously and properly - Very few SMEs in the country and especially in tourism sector
Opportunities	Threats
<ul style="list-style-type: none"> - Conservation, maintenance and development of cultural, historical and natural attractions - Investments in tourism infrastructure, attracting FDI into the sector - SMEs can be supplier of/partners in bigger tourism projects - Diversification of tourism products 	<ul style="list-style-type: none"> - Lack of enough security and deterioration of security situation - Big competition by neighbouring countries and by other Mediterranean countries which profits from tourism (Egypt, Tunisia, Turkey, Greece, etc.) - Political instability at this time - Not enough skilled labour in the industry

<ul style="list-style-type: none"> - Libya mediates (Egypt and Tunisia) with applicants in the SMEs in the field of tourism - Increased marketing and creation of a brand that identifies Libya 	
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Source: Own construction

3. Crisis management in Tourism

The most widely accepted definition of tourism is that given by the WTO, the agency of the United Nations tasked with developing and promoting tourism, as the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes.

“The sector faces challenges every year and this year is likely to be no different. The weakness and potential volatility of many currencies against the US dollar and a deep recession in Russia, a key outbound market, will slow outbound spending in line with slower world trade overall in the last and this year. However, falling oil prices will bring significant improvements or net oil importers in 2015, easing upward pressure on living costs, increasing disposable household incomes and domestic consumer spending, and lowering airfares. As a result, Travel & Tourism expansion is forecast to continue at a stronger rate than last year, with the total contribution to GDP expected to increase by 3.7%. New destinations and investment opportunities will also continue to emerge as tourism becomes increasingly affordable across the developing world. This growth will require countries to adopt a concerted and coordinated approach to talent planning and development between their industry, governments and educational institutions to ensure they fulfil their potential in the years ahead” (Scowsill, 2015. pp.1)

According to Beech and Chadwick (2006) “Tourism is good, it’s tourist that are bad.” That means, tourism is a process that can be studied in its own right, whereas tourists are the actors who participate in that process. The core products what producers offer typically include transport to and from a tourist destination, accommodation at that destination, and activities such as visits to tourist attractions within the destination.

The enormous growth tourism has experienced in past 60 years, also because of technological advancements in transportation, which brought the world’s destination within reach, has resulted in a much stronger interconnectedness and complexity within the tourism system and made the industry in many regions around the world an important factor in their socio-economic development.

As tourism is one of the most important industries – based on more than one billion international tourists – any crisis will have a much stronger negative impact compared to the past and will affect a much larger part of the population.

Moreover, negative consequences of crisis for tourism and hospitality industry are often felt in destination far away from where they have taken place (Pforr, 2006. pp.1).

Terrorism attacks, natural disasters, epidemics, economic or political crisis, etc. are all impacted on tourism. According to Floyed et al, McKercer & Hui (2004) the increase in perceived risk associated with a destination is reciprocal to its demand. They emphases that most tourists have relative short memories and will resume travelling when feel the immediate threat has passed. Coles (2004) points out that when not in crisis, destinations are in an extended programme of practically pre-event-limbo, almost waiting for the important trigger event to take place.

Ritchie *et al.* (2004) point out that „crises are indefinite, numerous, unexpected and unpredictable” or Prideaux (2004) tells us that disasters and crises are usually unforeseen, occur regularly, act as a shock on the tourism industry and are always poorly handled.

According to OECD's Strategic Crisis Management report (2012), there is a different crisis management approach, means crisis dealing with novelty. The main features of this new dealing are the following:

- Risk assessment includes horizon scanning
- Capability-based planning and network building
- Strategic crisis management training to learn agility and adaptability
- Strategic engagement from centres of government
- Crisis identification / monitoring: role of expertise
- Flexible and multi - purpose crisis management teams and facilities
- *Common concepts across agencies to inform leadership with high adaptive capacities*
- Similar tools and protocols that could be utilised for multi-crisis
- International co-operation
- Management of large-response networks
- *Ending crisis and restoring trust*
- Feedback.

As in Libya the crisis is already exists and the country is politically instable therefor „crisis communication” and „rebuilding trust” steps are important our point of view.

During a crisis, the emotions of the population and tourists, are usually running very high, and leadership (government) must convey messages that answer their expectations. It is also essential to disseminate some important messages to the public at risk for its own safety, and this requires appropriate crisis communication techniques and tools. Traditional crisis communication consists in communicating messages on the status of a crisis, its impacts, the actions and measures that have been mobilised. It is usually meant to feed the media with facts and to demonstrate citizens that the government is managing the incident as well as possible. Political leaders are often called upon to intervene in front of the media to play this role and therefore require *specialised trainings*. Meanwhile traditional ways of communication should not be abandoned, as crisis can damage or other problems are exist in telecommunication networks and thereby disrupt access to many social media platforms.

After large scale crisis with severe damages can have a critical impact on people's trust. Here starts the reconstruction process. *To regain the trust of people* (population, tourists, investors, etc.) risk management plan should provide (Baubion, 2012).

Especially when international tourism suffers from strong pressure, *the importance of domestic and close-to-home tourism* is obvious. Successful tourism destinations needed no short-term *"recovery" measures like infrastructural developments*.

Bilateral, multilateral, and even regional *treaties and agreements* on different aspects of tourism could be also successful with neighbouring countries.

4. Conclusions and suggestions

As tourism is one of the most important industries any crisis will have a much stronger negative impact compared to the past and will affect a much larger part of the population. According to the OECD's Strategic Crisis Management Report there is a new approach which helps us from the beginning till the feedback manage crisis. In our opinion in the current situation of Libya,

the most important is the rebuilding of communication and trust. The appropriate crisis communication techniques, tools and the regain the trust of population and tourist are the key elements of the successful beginning of tourism development in Libya.

The strategies of tourism development in Libya must be seen in the context of international and regional politics, security and stability issues, as well as in the context of social development and economic growth in the Middle East North Africa region. International tourism will continue to face numerous crises and problems as long as militarism and violence dominate in the region. Various marketing and promotional campaigns can serve to relieve the pressure on tourism sectors. International and regional cooperation and coordination at different levels provide an institutional background for crisis management. Nevertheless, the core problem of the tourism industry in the region has a structural character: very weak domestic tourism and poorly developed intra-regional tourism (Al-Hamarneh, Steiner, 2004).

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Vertical price transmission in selected agricultural markets in Slovakia

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Abstract

This study examines the price linkages along the food supply chain in Slovakia. By using time-series modeling techniques we evaluated the vertical price transmission between producer and consumer prices in selected agricultural markets, between the years 1997-2016. To examine the long-run relationship we applied a cointegration approach. An asymmetric error correction model was employed to quantify the extent, speed and nature of price adjustment. Moreover this approach allows us to test for the existence of a non-linear relationship between prices at various levels of the vertical food supply chain. The cointegration results indicate that the producer and consumer prices are cointegrated and we found that the price transmission along the food supply chain is asymmetric..

Keywords: price transmission, asymmetry, cointegration, error correction models

1. Introduction

In last decades the issue of asymmetries in price relationship has been analyzed in the agricultural sector and food economics. During that time numerous studies have been conducted related to price transmission, given that such asymmetries are a good indicator of market performance. This period was marked by the volatile development of agricultural commodity prices on world markets, what affected the welfare of producers on the one side and consumers on the other. Generally, there is a common perception among the producers that processors or retailers react faster to the rise in the producer price of commodities than to fall.

The potential growth of the commodity sector is greatly dependent on the world prices. The basic food, such as meat or milk recently shows a large variation in prices in the short-run and economists have long been concerned with the transmission of market shocks pass through one regional market to another regional market(horizontal price transmission). The transmission between the market subjects (vertical price transmission) highly depends on the type of products and it is a substantial component of linked markets, which produce value-added products. There was a significant effort in the empirical literature devoted to quantifying of the main characteristics of price transmission, such as magnitude or speed. It could differ because the price shock might be positive or negative, and it is being transmitted upwards or downwards along the supply chain (Vavra & Goodwin, 2005).

One of the grave issues with the profitability of production in the food sector is that price effects are rather asymmetric, instead of working according to the conditions of a competitive market. A lot of empirical studies have examined the price transmission between agricultural products, either on the vertical or horizontal level (Pozo et al., 2013; Kuiper & Lansink, 2013; Bakucs et al., 2014; Karikallio, 2015; etc.).

The goal of this article is to provide empirical evidence of linkage between producer and consumer prices, thus the vertical price transmission, for Slovak milk and meat sector, with using different econometrics analysis. Based on the previous study (Pokrivcak & Rajcaninova, 2014) we supposed that price transmission between producer and retail level is non-linear, i. e. changes in producer prices do not replay exactly to price changes in the retail sector. Our study is characterized by using a wider range of data that gives an overview of the price transmission mechanism over the nearly 20 years. The article is organized as follows: The next section presents the studies have a deal with

the issue of price transmission, followed by brief description of Slovak dairy, pork, and poultry market. The next part defines the data and methodological approach that we use in the empirical analysis. The estimation results and specification tests are discussed subsequently and the final section consists of the results and conclusions.

2. Literature review

The studies related to the price transmission have highlighted some causes of price asymmetries. In the food supply chain, asymmetric adjustment to price shocks can be observed due to uncompetitive markets linked with significant market power. Market power is often considered to be a potential explanation for asymmetric price transmission which reflects an unbalanced relationship between growth and decline prices of the products of farmers or producers at the beginning and consumers at the end of food supply chain (Moorthy, 2005). Such abuse of market power is mainly reported in the downstream level of the food supply chain (wholesaler and retail) that are more concentrated than the farm sector. According to the results of Acharya et al. (2011) market power helps the downstream level to ensure constant or higher margins in times of market crises and retailers to administer more market power during periods with excess farm production than when supply is in shortage. Also, Lloyd (2006) pointed out that the Bovine spongiform encephalopathy (BSE) crisis had an impact on the prices, but different for producers and retailers, what influenced farm–retail margins. In the lack of market power in the sector, the crisis would have the same impact on both sides and the same impact on the farm–retail margin. The studies of Chidmi et al (2005) or Lass (2005) showed that interaction of private market power of retailers and a public policy affected the performance of fluid milk markets including the nature of the price-transmission process. McLaren (2015) explores asymmetries in price between international and domestic prices in the presence of strong monopsony power of agricultural intermediaries.

The second commonly mentioned factor influencing price transmission in the chain is the existence of adjustment costs and menu costs. Azzam (1999) showed that retailers change the prices usually when the extra revenue from repricing is greater than the cost expended to reprice. These adjustment costs do not cause just the rigidity in output prices but also are involved in the asymmetric price transmission. According to Miller and Hayenga (2001), changes in wholesale prices are asymmetrically transmitted to retail prices in relatively low-frequency cycles, which does not support search costs. Retailers do not respond to the temporary price changes because of the high cost of adjusting of inventories and other costs involved in changing prices. Conversely, wholesale pork prices asymmetrically adjust to changes in farm prices at all frequencies. Zachariasse and Bunte (2003) argue that adjustment costs are probably more important to the explanation of poor price transmission than market power. In combination with other effects, such as inflation, stock building or perishability adjustment costs may also cause the price asymmetries.

Empirical literature often finds other factors that affect the price transmission, for example the interaction between market power and economies of scale (McCorriston et al. 2001; Lloyd et al. 2006), the cost share of farm input in final output (Bettendorf & Verboven, 2000), information asymmetries (Busse Silva-Russo & Zettelmeyer, 2006), psychological pricing (Herrmann & Moeser, 2006), government regulations (Bolotova, 2012; Romain, 2002), the form of retail demand and farm input supply (Weldegebriel, 2004), the perishability of the product (Kim & Ward, 2013), inflation (Ray, 2006; Aguiar & Santana, 2002) and others.

Empirical analysis of vertical linkage of price transmission has been conducted with a number of quantitative methods and models ranging from simple correlation analysis, regression models to econometric approaches such as:

- the linear Error Correction Model (ECM) used by Hassouneh (2015);

- the asymmetric/non-linear ECM used by von Cramon-Taubadel (1998). It was considered the non-stationary property of the data and incorporated the cointegration concept into the analysis. Koutroumanidis et al. (2009) used these techniques in analyzing asymmetric price transmission between producer and consumer prices in the forest products sector in Greece.
- the Markov-Switching ECM that improves the specification further by adding a threshold autoregression mechanism to a standard error correction model. Baghestany and Sherafatmand (2013) examined multiple regime shifts in the price relationship between wholesale price and retail price for milk in Iran.
- the error correction model with threshold cointegration, as proposed by Abdulai (2002) who investigated the mutual relationship between retail and wholesale prices of pork meat in the Swiss market or Luoma, et al. (2004) examined the transmission of producer price changes to consumer prices in Finnish beef and pork markets.

The number of publications has shown that asymmetric price transmission is the rule rather the exception and is quite common, especially in agriculture (Frey & Manera, 2007). Fernández & Amador et al. (2010) analyzed the dairy sector in Austria between years 1996-2010 and found asymmetries in the price transmission of milk products. Bakucs et al. (2012) conclude that Polish milk prices, compared to Hungarian ones, were characterized by short-term and long-term asymmetries. The causality between milk prices in Poland runs from the retail industry to the farm gate, while the causality between Hungarian prices runs from the farm to the retail sector. Capps and Sherwell (2007) identified price asymmetry in fluid milk prices in seven U.S. cities with using an asymmetric error correction model (ECM) or Zeng and Gould (2016) examine price transmission and compare the differences in retail price changes from a speed and magnitude perspective for 16 U.S. metropolitan areas. Gervais (2011) use the U.S. pork meat prices to provide strong evidence that price movements are non-linear. However, Miller and Hayenga (2001) showed support for retail price asymmetric transmission for low-frequency dynamics of wholesale prices, but unlike in the relationship between farm and wholesale prices, there was no asymmetric price transmission confirmed at any frequency.

Range of results indicate that international markets can be very different and despite the fact that the studies are different with applying different methodology, examine the different fields, they incline to confirm asymmetries in price transmission (e.g. Acosta & Valdes, 2013; Rezitis & Reziti, 2011; Bor et al., 2014; Cechura & Sobrova, 2008; Adachi & Liu, 2009; Guillen & Franquesa, 2010; Karantininis, 2008; or Luoma, et al., 2004).

2.1 Overview of selected markets

Dairy market

More recently, in the EU till 2015 the quotas regulated the raw milk production. Dairy husbandry is able to produce sufficient quantity of milk for domestic processing, but total production is threatened because of the competition of foreign firms, increasing import of milk and milk products to Slovakia, trade policy retails chains and lower price competitiveness of milk on the domestic market, compared with other countries of the EU.

During the period observed (1997–2016), the average retail prices of liquid milk have increased by 37,9%, while the average producer prices of raw milk have increased only by 6,9%. This time period was characterized by price volatility. As a consequence, both consumption and production of liquid milk have reduced. In particular, the liquid milk consumption per capita declined from 76,4 kg/capita to 47,4 kg/per capita, and the total drinking milk production from 380 mil.l to 285,5 mil.l. The most significant reductions in milk production that were observed in years 2004, 2007 and 2009, was explained by the considerable reduction of the number of

dairy cows. Those stood at 206 thousand in 2004, in 2009 decreased to 165,9 thousand and in 2016 fell by 32,9% (to 138,2 thousand cows) when compared with 2004. Milk crisis also contributed to this significant reduction.

Overall the consumption of all dairy products per capita is generally low in the Slovakian market. On average it is only 158.5 kg milk/per capita, while in EU it is about 270 kg/per capita a year. In addition to eating habits, it is influenced by price level in retail to the average income of the population.

Pork market

The production of pork had achieved economic loss pre-accession period to European Union (2003-2004), which was caused by the reduction in producer prices. In 2001, the producer price fluctuated in average on 2,03Eur/kg and in 2003 it was only 1,59 EUR/kg. These price changes continued also in 2004 when Slovakia joined the EU. The reason was the lack of preparedness of Slovakia, relating to the absence of significant subsidies for the development of this sector. Compared to other member countries, it was considered as a major disadvantage. It was reflected in the determination of a number of producer prices, crucial for the development of the sector. In 2009, farmers were temporarily granted aid per sow (about 50 EUR), which managed to mitigate the pace of decline the number of pigs. The situation is enhanced by the liberalized market, allowing the unlimited import of competing commodities and processed meat products. The number of pork producers slowly decline by 41%, from 1472 registered farms in 2004 to only 860 in 2014. The decrease in the pork production was met by a fall in pork consumption. In 2004 was recorded 31,9 kg/per capital but in 2014 was pork consumption only 29,5 kg/per capita, which was about 1,4 kg less than in 2013.

As main causes of gradual reduction of production, we consider increasing import of meat and meat products in Slovakia, as well as lower price competitiveness of pork in the domestic market. In the absence of state subsidies, the breeding pigs have been clearly influenced by price development of pigs for slaughter. The farm prices have been long-term low, which has a negative impact on the profitability of production.

Poultry

Slovakia has sufficient forage base for poultry breeding, but the amount of production decreased by 8,3% between the period 2004-2015. One of the reasons for declining number of poultry is Slovakia's accession to the European Union and establishing new retail chains on the market. Those fully used the liberalization of the international trading environment and especially significant differences in agricultural subsidy among the EU member states. As another reason is considered the preferences of customers who preferred the products in lower price ranges regardless the origin country. According to statistics, in 2015 we recorded an annual increase of production of slaughtered poultry in Slovakia from 91,4 to 96,9 thousands tone, which is 5,7%. From the total number of poultry production, the major share takes the hens (about 52,9%), chicken (about 43%) and ducks, turkeys and another species make the rest.

In 2014 the total annual meat consumption dropped by 10,1%. i.e. 47,9 kg/per capital and thereof poultry consumption forms 14,5 kg/per capita. Despite the declining situation, from 2004 the numbers of poultry producers have increased approximately by one third, represented mainly by small producers.

3. Data and Methods

Our sample contains the average monthly data for each commodity to estimate the linkage between producer and retail prices of selected food products (milk and meat). The time-series

data cover the period from January 1997 to December 2016, with a total of 240 observations. Producer prices were obtained from ATIS (a division of the Agricultural Payment Agency in Slovakia) and consumer (retail) prices received from Statistical Office of the Slovak Republic. On the January 1st in 2009 Slovakia joined the monetary union. The examined prices are expressed in the Euro currency after 2009 and the prices given in the previous currency (Slovak Crown, SKK) were converted by using the official conversion rate i.e.: 30, 1260 SKK/1 Euro.

We apply time-series modeling techniques to evaluate vertical price transmission between producer and consumer food prices in Slovakia. In this study an asymmetric error correction model is employed to quantify the extent, speed and nature of price adjustment.

As the first step, we test the stationarity of time series using two unit root tests: the Augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test. The number of lags of a dependent variable is determined by the Akaike Information Criterion (AIC). If both time series are not stationary, they are suitable to test for cointegration relationship between them. We employ the Johansen approach to test for cointegration.

The Johansen approach starts with a vector autoregressive model and reformulates it into a vector error correction model:

$$Z_t = A_1 Z_{t-1} + \dots + A_k Z_{t-k} + \varepsilon_t \quad (1)$$

$$\Delta Z_t = \sum_{i=1}^{k-1} \Gamma_i \Delta Z_{t-i} + \Pi Z_{t-k} + \varepsilon_t \quad (2)$$

where Z_t is a vector of non-stationary variables (producer and consumer prices), A are different matrices of parameters, t is time subscript, k is the number of lags and ε_t is the error term assumed to follow i.i.d. process with a zero mean and normally distributed $N(0, \sigma^2)$ error structure. The estimates of Γ_i measure the short-run adjustment to changes in the endogenous variables, while Π contains information on the long-run cointegrating relationships between variables in the model.

The above cointegration tests assume symmetric price transmission. In order to capture asymmetric movements in the residuals, Enders and Granger (1998) and Enders and Siklos (2001) propose to use threshold cointegration approach. Assuming the long run relationship between two nonstationary variables X and Y

$$Y_t = \lambda_0 + \lambda_1 X_t + \mu_t \quad (3)$$

where μ is the error term.

Engle and Granger (1987) show, that cointegration exists if the null hypothesis $\rho=0$ is rejected in:

$$\Delta \mu_t = \rho \mu_{t-1} + \xi_t \quad (4)$$

where ξ is the error term for the residuals. Adjustment of the series of residuals expressed in would be symmetric. To capture the assymetry in adjustment process, a two-regime threshold cointegration approach should be used:

$$\Delta \mu_t = I_t \rho_1 \mu_{t-1} + (1 - I_t) \rho_2 \mu_{t-1} + \xi_t \quad (5)$$

where I_t is the Heaviside indicator $I_t=1$ if $\mu_{t-1} \geq \tau$ or $I_t=0$ if $\mu_{t-1} < \tau$. If μ_{t-1} is bigger than the threshold τ , then adjustment is at the rate ρ_1 . If μ_{t-1} is smaller than the threshold τ , adjustment is

shown in ρ_2 . When $\rho_1=\rho_2$, then the adjustment process is symmetric. If the null hypothesis $\rho_1=\rho_2=0$ is rejected, then X and Y are cointegrated and the following TAR model is estimated:

$$\Delta Y_t = \theta_Y + \delta_Y^+ E_{t-1}^+ + \delta_Y^- E_{t-1}^- + \sum_{j=1}^J a_{Yj}^+ \Delta Y_{t-j}^+ + \sum_{j=1}^J a_{Yj}^- \Delta Y_{t-j}^- + \sum_{j=1}^J \beta_{Yj}^+ \Delta X_{t-j}^+ + \sum_{j=1}^J \beta_{Yj}^- \Delta X_{t-j}^- + v_{Yt} \quad (6)$$

where ΔY_t and ΔX_t are dependent and independent variables in their first differences, E is the error correction term, δ represents the speed of adjustment coefficients of ΔY_t if Y_{t-1} is above and below its long-run equilibrium, θ , δ , α and β are coefficients and v is the error term, t is time subscript and j is the number of lags.

Two error correction terms are defined as:

$$E_{t-1}^+ = I_t \mu_{t-1} \quad (7)$$

$$E_{t-1}^- = (1 - I_t) \mu_{t-1} \quad (8)$$

Enders and Granger (1998) and Enders and Siklos (2001) proposed also a model for cointegration, known as momentum threshold autoregressive model. The term “momentum” describes the rate of acceleration of prices and takes into account steep variations in the residuals; it is especially valuable when the adjustment is believed to exhibit more momentum in one direction than the other. Heaviside Indicator in this case is $I_t=1$ if $\Delta \mu_{t-1} \geq \tau$ or $I_t=0$ if $\Delta \mu_{t-1} < \tau$.

Threshold error correction models were used for example by Goodwin and Holt (1999); Goodwin and Harper (2000); Goodwin and Piggott (2001); Abdulai (2002); Serra and Goodwin (2003); Gonzales et al. (2003); Vavra and Goodwin (2005); Liao and Sun (2011) or Ning and Sun (2012). Abdulai (2000, 2002) used both TAR and M-TAR models and found out, that the M-TAR models fit data better than the others.

To summarize, four asymmetric models are considered in our study. They are threshold autoregression model with threshold value equal to zero; threshold autoregression model with threshold value estimated (consistent threshold autoregression model); momentum threshold autoregression model with threshold value equal to zero; and consistent momentum threshold autoregression model with threshold value estimated. A model with the lowest AIC and BIC will be used.

4. Results and Discussion

Table 1: Descriptive statistics

<i>Variable</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
<u><i>Producer prices</i></u>					
milk	240	28.944	3.808	17.670	39.200
poultry	240	0.927	0.089	0.700	1.130
pork	240	1.656	0.203	1.250	2.260
beef	240	2.831	0.238	2.260	3.270
<u><i>Consumer prices</i></u>					
milk	240	0.622	0.115	0.390	0.800
poultry	240	2.361	0.198	1.940	2.810
pork	240	4.980	0.589	3.630	6.430
beef	240	6.921	1.122	4.930	8.790

Source: Own elaboration based on ATIS and Statistical office data

4.1 Testing the stationarity of time series: ADF test and Phillips Perron test

As the initial step of our empirical approach we test the stationarity of time series using two unit root tests: Augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test. Results of the tests (Table 1 and 2) confirm that all-time series are non-stationary. We stationarized them by taking first differences. The tests indicate that all variables are stationary in first differences. The lags of the dependent variable in the tests were determined by Akaike Information Criterion (AIC).

Table 2: Augmented Dickey Fuller test results

	Level		1 st Diff	
	ADF _c	ADF _t	ADF _c	ADF _t
Producer prices				
milk	-2.614	-2.519	-5.394***	-5.342***
poultry	-2.454	-3.029	-6.815***	-6.802***
pork	-1.463	-2.767	-4.265***	-4.320***
beef	-2.329	-2.884	-7.404***	-7.432***
Consumer prices				
milk	-2.191	-2.187	-6.789***	-6.913***
poultry	-1.773	-2.285	-6.079***	-6.079***
pork	-1.388	-2.430	-8.223***	-8.237***
beef	-1.909	-1.679	-9.755***	-9.909***

Source: Own elaboration based on ATIS and Statistical office data

Note: ADF_c is the ADF with an intercept and ADF_t with an intercept and a deterministic trend.

*, **, *** denote significance at the 1%, 5% and 10% significance levels.

Table 3: Phillips Perron test results

	Level		1 st Diff	
	PP _c	PP _t	PP _c	PP _t
Producer prices				
milk	-2.824	-2.789	-8.068***	-8.030***
poultry	-2.363	-2.917	-19.281***	-19.243***
pork	-2.595	-2.148	-16.130***	-16.189***
beef	-2.208	-2.762	-17.809***	-17.817***
Consumer prices				
milk	-2.271	-1.638	-10.634***	-10.746***
poultry	-2.261	-2.815	-9.276***	-9.248***
pork	-1.610	-2.354	-10.153***	-10.155***
beef	-1.878	-1.385	-13.091***	-13.229***

Source: Own elaboration based on ATIS and Statistical office data

Note: PP_c is the PP with an intercept and PP_t with an intercept and a deterministic trend.

*, **, *** denote significance at the 1%, 5% and 10% significance levels.

4.2 Threshold cointegration

Looking at the results in Table 3 we observe strong evidence of cointegrating relationship between producer and consumer prices of milk and pork meat, weak evidence for the prices of potatoes and no cointegration for beef and poultry prices. On the other side, threshold cointegration tests suggest that there is a strong evidence of cointegration relationship between the producer and consumer prices of all analysed commodities. As revealed from the results,

even the pairs of prices that have not proved to be cointegrated with the Johansen test (Table 3) are cointegrated with threshold adjustment. This means that Enders and Granger model with threshold fits data better. From the tests it also follows that there is strong evidence of asymmetry for producer and consumer prices of milk and potatoes and weak evidence of asymmetry for poultry and beef. Note that the absolute value of the speed of adjustment of positive price deviations in case of poultry, beef and potatoes is higher (lower in case of milk and pork) than the speed of adjustment of negative price deviations. Deviations from long-term equilibrium resulting from price increases (above the threshold) in producer prices of poultry, beef and potatoes would be more persistent compared to price deviations resulting from price decreases (below the threshold).

Table 4: Johansen cointegration test results

Producer - Consumer	Rank	Johansen trace statistics	Trend specification	Lags
milk	0	31.666	Restricted constant	3
	1	6.506***		
poultry	0	16.491	Restricted constant	3
	1	4.104		
pork	0	46.606	Restricted constant	2
	1	2.814***		
beef	0	17.406	Restricted constant	2
	1	6.259		

Source: Own elaboration based on ATIS and Statistical office data

Note: *, **, *** denote significance at the 1%, 5% and 10% significance levels.

Table 5: Threshold cointegration test results

	Model	Threshold	Lags	ρ_1	ρ_2	$\Phi(H_0: \rho_1 = \rho_2 = 0)$	$F(H_0: \rho_1 = \rho_2)$
milk	cMTAR	-0.010	2	0.002	-0.080***	8.605*** [0.000]	11.468*** [0.001]
poultry	cMTAR	-0.012	2	0.065***	0.011	7.379*** [0.001]	5.598** [0.019]
pork	cTAR	-0.066	1	-0.111***	-0.189***	9.403*** [0.000]	1.276 [0.260]
beef	cMTAR	1.010	3	-0.090***	-0.019	4.131** [0.017]	3.157* [0.077]

Source: Own elaboration based on ATIS and Statistical office data

Note: *, **, *** denote significance at the 1%, 5% and 10% significance levels, with P values in the brackets

Because there is strong evidence of cointegration relationship between the producer and consumer prices we have estimated error correction models (Table 4) for these commodities following the equation 6. As seen from the results in Appendix 1, producer prices of milk and poultry react mostly to their own previous shocks and do not react to shocks in consumer prices. Milk and poultry consumer prices are driven by price shocks of milk and poultry producers respectively. Error correction terms are negative and significant showing a tendency of consumer prices to move back to the long run equilibrium. Pork and potatoes' consumer prices are weakly influenced by producer prices in the short run, however in the long run, their error correction terms are not significantly different from zero. On the other side beef consumer prices do not react to shocks in producer prices in the short run, but their error correction terms have the correct sign and are significantly different from zero.

5. Conclusion

The paper empirically investigated the vertical price transmission among producer and consumer prices of dairy, beef, pork and poultry market in Slovakia. The data used in this analysis are the average monthly prices series from 1997 to 2016. The Johansen's procedures and Enders and Granger model were used to test the existence of a long-run relationship. As revealed from the results, there is strong evidence of asymmetry for producer and consumer prices of milk and weak evidence of asymmetry for poultry and beef. The error correction model was employed to quantify the extent, speed and nature of price adjustment. The results showed that the producer prices of milk and poultry react mostly to their own previous shocks and do not react to shocks in consumer prices. Milk and poultry consumer prices are driven by price shocks of milk and poultry producers respectively. Pork consumer prices are weakly influenced by producer prices in the short run, but on the other side, beef consumer prices do not react to shocks on producer prices in the short run.

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Appendix

Appendix Table 1: Results of the asymmetric error correction model with threshold cointegration

	Milk		Poultry		Pork		Beef	
	Producer	Consumer	Producer	Consumer	Producer	Consumer	Producer	Consumer
(Intercept)	0.001	0.002	-0.005	0.001	0.008	0.001	0.003	0.002
X.diff.producer.t_1.pos	0.343***	0.229***	0.442***	0.169**	0.050	0.186*	0.029	0.063
X.diff.producer.t_2.pos	0.225*	0.026	0.009	-0.002	-	-	0.103	-0.039
X.diff.producer.t_3.pos	-	-	-	-	-	-	-0.070	0.038
X.diff.producer.t_4.pos	-	-	-	-	-	-	-	-
X.diff.producer.t_1.neg	0.405***	0.020	-0.737***	-0.006	0.879**	0.308**	0.261**	0.024
X.diff.producer.t_2.neg	0.297***	0.260***	0.434***	0.157**	-	-	0.071	0.050
X.diff.producer.t_3.neg	-	-	-	-	-	-	0.431***	-0.034
X.diff.producer.t_4.neg	-	-	-	-	-	-	-	-
X.diff.consumer.t_1.pos	0.107	0.164*	-0.051	0.458***	0.220*	0.122***	0.237	0.212**
X.diff.consumer.t_2.pos	-0.187	0.003	0.306*	-0.061	-	-	-0.102	-0.077
X.diff.consumer.t_3.pos	-	-	-	-	-	-	-0.045	-0.032
X.diff.consumer.t_4.pos	-	-	-	-	-	-	-	-
X.diff.consumer.t_1.neg	-0.111	0.051	0.347*	0.260**	0.187	0.121**	0.195	0.090
X.diff.consumer.t_2.neg	0.162	0.089	0.096	0.233**	-	-	0.142	0.138
X.diff.consumer.t_3.neg	-	-	-	-	-	-	0.056	0.016
X.diff.consumer.t_4.neg	-	-	-	-	-	-	-	-
X.ECT.t_1.pos	-0.007	-0.013	-0.038	-0.063***	-0.346***	-0.022	0.061***	
X.ECT.t_1.neg	0.066***	-0.035**	-0.008	0.000	-0.279***	0.039	0.002	-0.019**

Source: Own elaboration based on ATIS and Statistical office data

Particularities in Human Resources Management in Multinational Companies

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Abstract

One of the results of globalization process, which includes Slovak Republic as well, is the formation of multinational companies whose business activities are beyond national boundaries. The national economy is influenced by the global environment which creates and changes conditions for working people. Employees get opportunities for the development and gaining intercultural competences by working in a multinational company. It also brings advanced technologies, know-how, business partners and other important organizational elements and their cultural and social differences. The demand for employees and managers, who are able to work in a multicultural area increases as well as demands on their abilities and skills. Motion of people, information, ideas, products and innovations through different countries requires competent and flexible managers who are able to manage diversity, to deal with unexpected situations, to manage the work of employees of different cultures and to quickly adapt to dynamically changing conditions. Therefore, human resources management in multinational companies gets international dimension induced by the actions taken in the intercultural environment. The aim of this paper is to present the views of domestic and foreign experts in international human resources management. It is based on the comparison of the theoretical knowledge with the results of survey among managers of selected enterprises belonging to multinational companies in Slovak Republic.

Key words: International management, Human resources management, Multinational company, Sociological survey, Intercultural environment.

JEL Classification: M 12, M 16

1. Introduction

Nowadays, we are witnessing rapid changes in all the areas of society. New trends are reflected in the behavior of people, in the hierarchy of their needs, their preferences in their spare time activities and in the work area, as well. It is also fraught with the need for changes in previously established way of people's treatment. The procedures valid a few years ago are presently seen as ineffective. One of the reasons is the emergence of global multinational companies, whose influence and importance in the market is growing with staggering speed. Management of such business units requires a different approach than the management of companies not exceeding the borders of the mother country. The daily managerial work needs to cope with new issues that also require greater readiness and a higher level of knowledge and skills. Motion of people, information, ideas, products and innovations through different countries requires competent and flexible managers who are able to manage diversity, to deal with unexpected situations, to manage the work of employees from different cultures and to quickly adapt to dynamically changing conditions. The aim of the paper is to identify the particularities which characterize the management of multinational companies operating in the Slovak market compared to the management of national companies.

2. Theoretical aspects of international human resources management

The arrival of globalization has led to organic growth and overall increasing numbers of multinational organizations with accompanying demand for leaders capable of operating effectively in such an environment. The challenges facing international human resources management (IHRM) in meeting these needs are daunting (Story et al., 2014). The issue of international human resources management among experts appears since the late 1980s. The perception of particularities in international human resources management changed considerably over the last two decades because there is a significant difference in conditions in which the multinational companies are operating as well as in the requirements of people who work in these companies. The dominant theme in the literature on HRM in MNCs has been the global local question. A key tension that MNCs face, it is commonly assumed, is how to balance the pressures for globally standardized policies across their operations with the need to be responsive to local (national) conditions (Edwards, Kuruvilla, 2005). Management and organization are socially embedded on different, interpenetrating levels; local economies, regional districts, national institutions, international networks, and transnational regulation are all aspects of the social, organizational, and economic structures in which companies are situated (Delbridge et al., 2011).

Initially, international human resources management was mainly concerned with expatriate management and its associated challenges for international managers, but the field of International HRM can today be characterized by three broad approaches. The first emphasizes cross-cultural management: examining human behavior within organizations from an international, or more specifically, the intercultural perspective. The second approach developed from the comparative industrial relations and HRM literature and seeks to describe, compare, and analyze HRM systems in various countries. The third approach seeks to focus on aspects of HRM in multinational firms. This includes the issue of expatriate management as well as the challenges of global standardization and local adaptation of HRM in the multinational enterprise (Festing, et al., 2013). Global expansion has made international business much more interdependent with increasing numbers of alliances, international joint ventures, mergers and acquisitions, all with improved and rapid communications. We can therefore define international HRM as the understanding and development of strategies used to organize human resources in international operations (Hurn, 2014).

The basic attributes of international human resources management include: the authority and responsibility for human resources management system depending on the access of multinational companies to foreign markets; the level of convergence respectively divergence affecting the creation of procedures, standards and norms in working with people; human resources management in various organizational units of a multinational company requiring continuous communication in a foreign language; cultural differences of employees, including different business environments and changes in customary practices of human resources management; intercultural competencies as a prerequisite for working in a multinational company; unconventional organizational structures in affiliated multinational companies that require flexible and new solutions; the range of responsibilities of human resources extending to activities for foreign employees and their family members; human resources management processes acquiring new dimensions; is more heterogeneous and more difficult to manage employees structure; work in the global space that opens up new opportunities for employment and career development for the international movement of labor force, with all of its positives and negatives.

Taking a broader perspective, the transfer and diffusion of organizational practices in MNCs is mediated by complexes of institutions at sub-national, national and supra-national levels. Decisions on the location of new and replacement investment are, in many cases, affected by the human resources available to subsidiary units, both in the firm itself and in its wider production network (Almond, 2011).

3. Methodology and results

Within the research project, we conducted a survey aimed at analyzing the particularities of human resources management in multinational companies operating in Slovak Republic. We wanted to find out?How human resources managers evaluate the approach of the management of parent company and what the particularities in working with human resources are. Our examination is based on the assumption that the level of competence in making the decisions related to the management of human resources given to managers of local companies varies, depending on the approach of the parent company to foreign markets.

Using some personal contacts and by direct addressing of human resources managers working in multinational companies, we managed to carry out structured interviews in 26 companies. Regarding sectoral structure, the sample includes 13 network hotels that are part of the 4 hotel chains, 9 manufacturing companies (3 companies operating in automotive industry), 4 trading companies, 4 paper companies, 3 IT and services providing companies and 2 financial companies.

The basic used method was structured interview, which was based on asking the experts the same questions on the researched issue and trying to achieve a consensus in their opinions on the human resources management of multinational companies. We conducted the structured interviews in 2015 and 2016 respectively. The contents of the interview were questions related to the approaches of the management of parent companies, authorities and responsibilities of executives and human resources managers in daily work of managers in companies located in Slovak Republic. The main requirement was the work in an intercultural environment. In the second part of the interview, we focused on forming the organizational culture of the company, its preferred values and standards of behavior, evaluation of basic processes of human resources management in multinational companies, mainly the way of the recruitment and selection of employees, their development, performance management, conflicts and misunderstandings solving, work motivation, influence of national culture on the organizational culture of the company.

Almost half of the managers (49 %) consider the authority and responsibility for making strategic decisions as balanced, 31 % think it is more of a decentralized one and 20 % believe that human resources management is more centralized. The distribution of authorities in the management and decision-making is related to the parent company's approach towards the forming the organizational culture and foreign markets. The application of values, norms and standards of the parent company in the subsidiaries dominates in 19 % of companies with ethnocentric approach towards the market, a freedom in managing of human resources is present in 31 % of companies with a polycentric approach. Respect for common values and standards prevail in 42 % of companies using a transnational approach and two companies with regiocentric approach towards human resources management. The main interest of managers is to combine the rules of the parent company with management policy regarding labor relations in Slovak Republic, which documents the predominance (80 %) of employment contracts corresponding with the current Labor Code.

Almost 88 % of surveyed companies respect common international standards and centrally adopted rules of parent companies which are in accordance with the valid Slovak legislation. There are, however, some exceptions from the local legislation affected by labor law including for example the length of maternity leave or termination of employment relationship. Some of the binding guidelines and rules include anti-corruption policy and employees attend training with subsequent testing. The ethical code of employees, compliance guide, standards of behavior, regulation on the use of symbols within organizational units (logo, plant architecture, equipment, communication rituals and uniforms), technical standards, organizational rules of the company and others are also mandatory. The rules connected to sending out and stay of expatriates valid in parent companies are applied in subsidiaries and supplemented by the rules arising from local legislation, such as holidays, work rules, occupational health and safety, fire protection, business trips rules and social fund rules.

An electronic communication is the most common source of obtaining information. Information systems are interconnected with the parent company. The relevant information about ongoing activities that provide daily, monthly, some quarterly and annual summary reports are recorded on the central server. Personal meetings of managers of subsidiaries with headquarters are organized regularly on a monthly and/or quarterly intervals (31%), once or twice a year (69%) and if necessary (ad hoc) more often. Work meetings are being held alternately at the place of subsidiaries, and are focused mainly on financial situation, product, strategy, controlling, organization, exchange of work experience, personnel matters, customer satisfaction and audits.

A convergence is predominated in international human resources management in Slovak Republic. The procedures and best practices examples (81%) proved to be useful. According to the human resources managers in Controls "common philosophy, vision, creed, strategy and human resources management are perceived and accepted quite naturally". A total of 19 % of surveyed companies have retained a freedom to create their own standards and procedures of personnel work management.

Recruitment is the most important (73 %) process of human resources management. As noted by the manager of the Double Tree hotel by Hilton, "a good selection is half of the success." The process of evaluation and employees' performance management (61.5 %) is the second most important process, followed by employees' work motivation (53.8 %), education and career development (42.3 %), job evaluation (38.4 %), talent searching and development (30.8 %), strategic human resources management (15.4 %), job analysis (11.5 %), adaptation and employees' welfare (7.7 % both).

Much greater emphasis on evaluating and managing of employees' performance is given in the multinational companies compared to the independent companies. Performance management is based on a mutual agreement of future performance and acquiring the skills needed to achieve it between managers and employees. There is a system of evaluation based on the results and behavior of employees. However, different companies use different methods. The evaluation includes managerial competencies needed for work in an intercultural environment including speaking in foreign languages. Online evaluation forms are used by 42 % of companies. About 54 % of the surveyed companies have some experience in evaluating and rewarding of expatriates. Management is focused on linking business performance to the performance of individuals and teams, with the emphasis on employees' performance that most contributes to achieving corporate goals. Work performance is taken into consideration in remuneration system and in providing employees' benefits.

Questions relating to the impact of HR management processes on the development and stabilization of employees were also a part of structured interviews. The particularities in

employees' development are mainly individual development programs, talent pools, job shadowing and rotation plans. Human resources development in a multinational company largely depends on the personality of a senior HR manager. The employees are prepared for work in intercultural, flexible and dynamic environment already in the process of continuous adaptation. The managers consider opportunities for career or individual development and providing employees with benefits to be the most powerful elements of employees' engagement and stabilization in the company. Individual development plan (1), introductory training and adaptation (2), strategic recruitment and selection (3), training, mentoring, coaching at the workplace (4), talent development (5), performance management system (6), corporate employees' benefits (7) and succession planning (8) can be considered as the most important processes of development and stabilization. Stabilization and development of employees is positively influenced by the talented and experienced colleagues, team-building activities and inherent loyalty.

We have achieved a consensus in responses of respondents in the matter of respecting cultural differences of employees of different cultures (100 %). Nearly 46 % of respondents declared strong influence of national culture on the formation of organizational culture in a positive and negative direction, according to 19 % of managers national culture does not affect the organizational culture in any way and 35 % believes that organizational culture has a strong influence on the work of companies and individuals. The positive impact of national culture on organizational culture can be seen mainly in forming the organizational culture, especially in forming the environment conducive to international entrepreneurship, successful achievement of goals, use of positive aspects, customs and values of the national culture in terms of organizational culture of the company. According to one of the respondents "We are trying to suppress negative elements of national culture, highlight its positive aspects and promote the standard rules of behavior that are accepted globally."

4. Conclusion

The scope of globalization continues to expand. More and more firms, large and small, from every country, private and public, independent, multinational, and transnational, participate in global commerce. Yet the conduct of business across international borders continues to be difficult and complex (Briscoe, 2014).

The aim of this paper was to identify the particularities that characterize the management of multinational companies operating in the Slovak market compared to the management of national companies. To achieve this, we conducted a research in 26 multinational companies operating in Slovak Republic in 2015 and 2016. An important finding was that the convergence dominates in human resources management, thus we can see a strong link between the parent company and its subsidiaries. The most important processes that managers must deal with include staff selection, employee's performance management and evaluation and work motivation. Surprisingly there is the least emphasis on adaptation and employee's welfare. In all these activities, managers are faced with particularities which are the distinguishing feature of the parent culture different from the one prevailing in Slovak Republic. The legislative framework is equally important in most of the surveyed companies. The rules connected to sending out and stay of expatriates valid in parent companies are applied in subsidiaries and supplemented by the rules arising from local legislation, such as holidays, work rules, occupational health and safety, fire protection, business trips rules, social fund rules. The exceptions from the local legislation affected by labor law include for example the length of maternity leave or termination of employment relationship. A strong influence of national culture can also be seen in forming the organizational culture, especially in forming the

environment conducive to international entrepreneurship, successful achievement of goals, use of positive aspects, customs and values of the national culture in terms of organizational culture of the company.

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Globalization and its impact on the business sector in the Slovak Republic

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Abstract

Defining the process of globalization and its impact on the economy of Slovak Republic. In this article we will focus on the liberalization of international trade and interdependency and its impact on the economy in Slovak Republic. Advantages and disadvantages of globalization. By using macroeconomic indicators such as gross domestic product, foreign direct investments and foreign trade turnover are identified factors affecting the economy development in the Slovak Republic. The main aim of this paper is to analyse the level of globalization in Slovak Republic and its impact on the business sector. We will focus on the impact of globalization on the business sector, concentrating on trade and investment and the level of unemployment in Slovak Republic.

Keywords: *economy, business sector, investment, unemployment*

JEL Classification: *E22, F23, F62*

1. Introduction

One of the main indicators of the economy is unemployment, which also helps to further the economic growth. Slovak Republic belongs to the countries plagued especially by long-term unemployment. This phenomenon significantly contributes to the adverse development of public finances but it also reflects the possible inadequate utilization of production capacities in the economy. The unemployment rate is more a phenomenon of people with a low level of qualification and less a phenomenon of those with a higher level of qualification. A high unemployment rate was recorded especially during 1991 and at the beginning of 1999. (Rievajová, 2001) The biggest problem is long-term unemployment that lasts 12 months or more. (Rievajová, 1996) Investing into human capital in the broader sense and education in the narrower sense brings about higher personal and social profits. Recording knowledge of a very high quality and effectiveness within a database or in human capital is a great source of wealth. (Galovská, 2014) As far as the macroeconomic significance goes, the same holds true for the investments into human capital in countries that have a high investment rate and thus also have a higher GDP per inhabitant and a higher level of labour productivity. On the other hand people with a higher level of education are more active in the economy and they also have a higher employment rate in comparison with those that have a lower level of education. (Rievajová et al., 2004)

In this article we will focus on the active politics of the labour market and how these influence the selected business sectors. The aim is to compare the tools of the active politics of the labour market, which encompass the support for creating new job opportunities in the sectors of agriculture and the automotive industry and how these influence the unemployment in the given sector. The resulting analysis should depict the effectiveness of the measures that were introduced into the sectors of agriculture and the automotive industry. The sectors of agriculture and the automotive industry are of great significance in Slovak Republic. The automotive industry is currently a key factor for Slovak Republic. It is the main driver of economic growth that also provides economic development and helps to increase the employment rates. On the

other hand, the automotive industry is also supported by the state. As the second sector we chose agriculture. In the past agriculture used to be a very important sector in the economics of Slovak Republic but its significance has declined during the previous years. The state is trying to support the sector of agriculture and to increase its contribution to the GDP so that it can be on par with at least the average of the countries of the Visegrad group.

2. Data and Methods

To determine how active politics of the labour market influence the sector of agriculture and the automotive industry we will use the statistical methods of measuring the mutual linear interdependence of variables (correlation and covariance analysis). Using the aforementioned methods we will determine if there is an interdependence between the values of active politics of the labour market and the influence on unemployment and also what is the nature, rate and extent of this interdependence. We will measure the extent of the interdependence between the active politics of the labour market and unemployment via the covariance analysis. In the calculation we will use the covariance matrix, which characterizes the extent of the interdependence between these indicators.

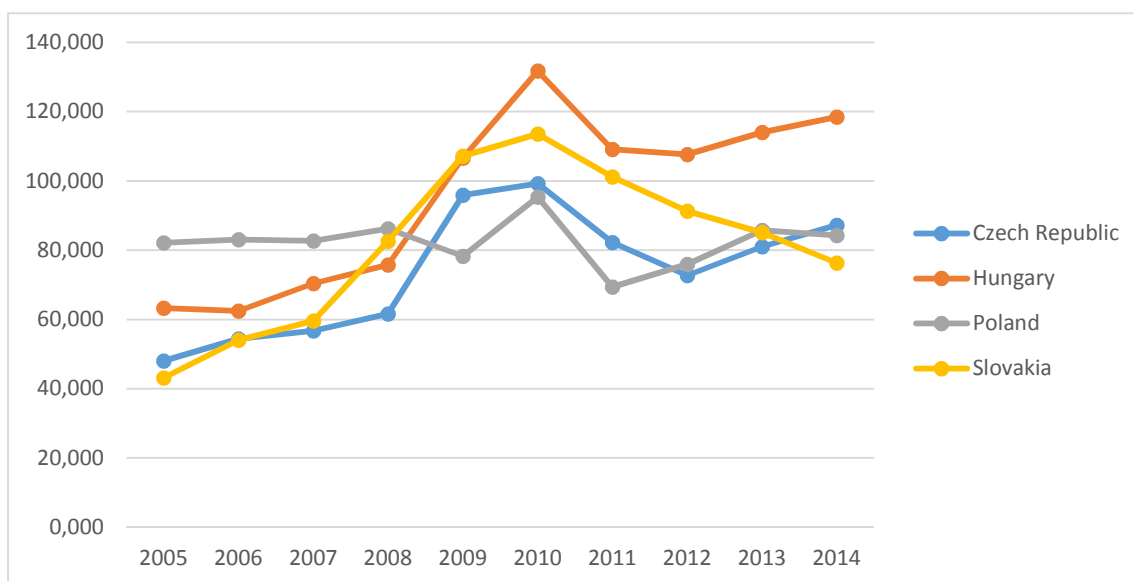
3. Results and Discussion

The state is creating an environment for businesses so that these can create new job opportunities in the form of support systems. In this case leadership is an essential function of the management. This can be defined as a system that influences people, so that their activities contribute to the achievement of goals required by the organization. (Mura at al., 2015). At the same time the state, via the active politics of the labour market, is creating a support and help system for the citizens so they can be integrated in a more effective manner into their job opportunities. It is a set of forms, activities, measures and tools that are to be applied in the employment services when working with people who have been registered as unemployed. The politics of the labour market (Klimko at al., 2013) can be divided into passive and active politics. An older form of the politics of the labour market is the passive politics of the labour market. It focuses on providing unemployment benefits, which are provided via an institution determined by the state, in this case the Social security office. Active politics of the labour market is a newer form of the politics of the labour market. Its significance became clear in the seventies, when the measures of the passive politics were no longer enough. They demotivated people from working and the costs needed to pay the unemployment benefits grew rapidly. That is why the focus shifted onto the active parts of the politics. Tools play a significant role in the active politics of the labour market that are focused on supporting the creation of new job opportunities. Among the main tools we include the provision of benefits to certain groups of unemployed people, like to those that want to become self-employed or want to create a new job opportunity with an employer. However, they need to fulfil conditions so that they can receive one of the benefits (Bardošová at al., 2012). The aim of the active politics of the labour market is to help those that might become unemployed and to help the unemployed so that they can find a job before they reach the state of long-term unemployment. The basic services provided by the active politics of the labour market, which are regulated by the Unemployment services Act (Act 5/2004), are as follows:

- arranging for a suitable employment,
- professional consulting services,
- education and preparation for the labour market,
- support for the creation of job opportunities.

The following chart shows the position of Slovak Republic in comparison with the other countries of the Visegrad Group (hereinafter "V4").

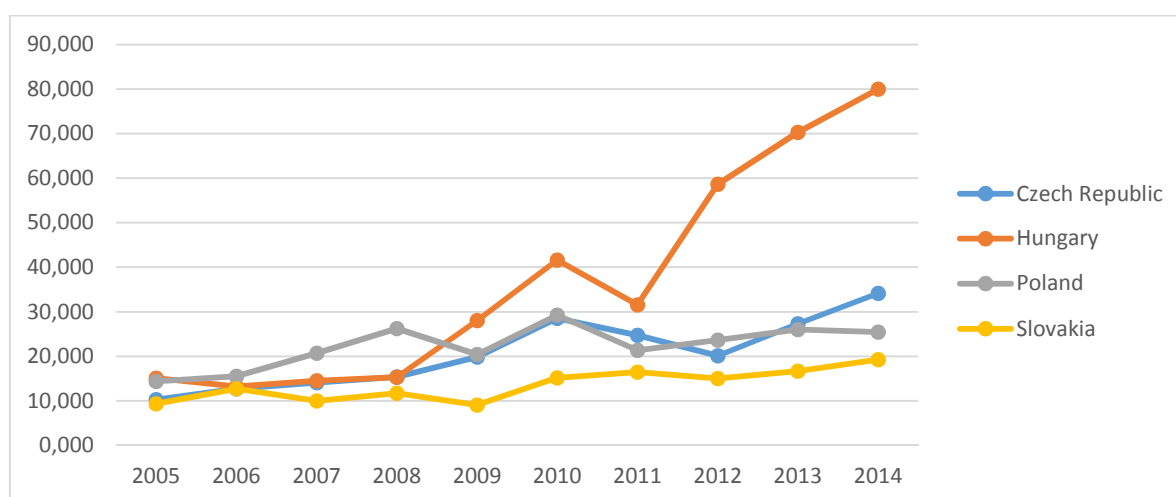
Figure 1: Expenditure per capita on labor market policy in V4



Source: Own processing, data from Eurostat 2016

According to the information in chart No. 1 Poland has the highest expenses when it comes to politics of the labour market for the given time period. This means that Poland gives the highest amount of support for the creation of job opportunities among the V4 countries. Slovak Republic is the country with the lowest expenses and thus lowest support for the politics of the labour market. This phenomenon has persisted throughout the whole given time period. The Czech Republic and Hungary have had the same expenses from 2005 until 2009 as far as the support for the politics of the labour market goes. A change came in the year 2010, when there was a slight increase in the expenses for the support of the politics of the labour market.

Figure 2: Expenditure per capita on Active Labor Market Policy for Employers in V4



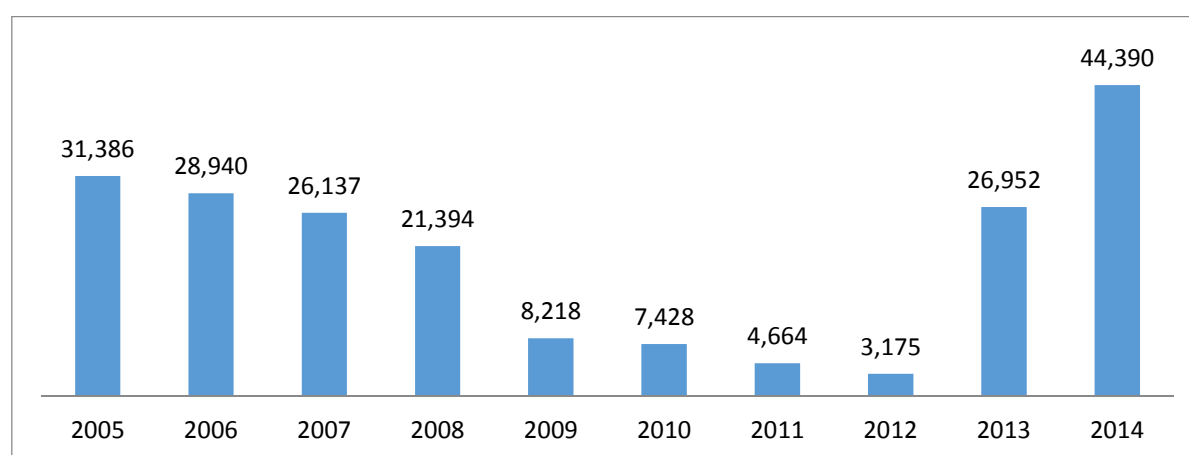
Source: Own processing, data from Eurostat 2016

Within the tools used in the active politics of the labour marker we will further analyse the support of creating job opportunities in the business sector. The development of the expenses for the active politics of the labour market can be seen in chart No. 2.

We can clearly see that Slovak Republic is lagging behind. This means that among the V4 countries Slovak Republic has the smallest amount of money given to the employers in order to support the creation of job opportunities. In comparison to that Poland has given far greater support for the creation of job opportunities and as far as active politics of the labour market go it is on a much higher level than Slovak Republic. Therefore we will further analyse the provision of benefits for the creation of job opportunities. We compare the provision of such expenses in two business sectors.

Slovak Republic has given the greatest support for the creation of job opportunities in the year 2014. From 2009 until 2012 the expenses were at the lowest point. We can see that the aforementioned data influences the unemployment rate as this has decreased during the years 2013 and 2014.

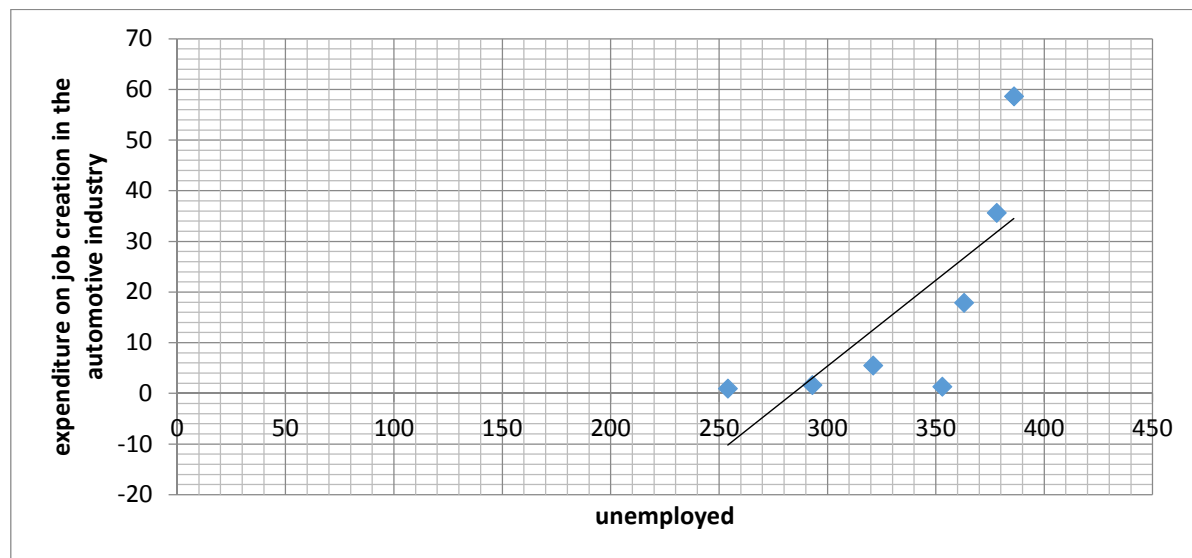
Figure 3: Expenditure on job creation in the Slovak Republic



Source: Own processing, data from Eurostat 2016

The benefits for the creation of job opportunities are intended for the employers so that they have an easier time when trying to create new job opportunities. The amount of the provided benefits depends on a number of criteria and the source of the funds. The main provider is the Ministry of labour, social affairs and family of the Slovak Republic along with its bodies that determine the amount of the provided benefits. All of these benefits come from the resources of the state budget. At the same time, funds for the creation of job opportunities can also be provided via the European Union from the resources of the European Social Fund, which are intended for national projects. The ratio of co-financing is precisely defined for each program and region where funds are supposed to be provided. In order to determine how the spent amount influences the creation of job opportunities in the two sectors we used a correlation analysis. We have selected two business sectors that are of great significance in Slovak Republic (agriculture and the automotive industry). The automotive industry in Slovak Republic is of great importance because it secures economic growth. However, it draws a not insignificant amount of support from the state. (Drahokoupil et al., 2015) One of the forms of support that it uses is also the benefit for the creation of job opportunities. Due to this we further researched the interdependence between the total amount of the benefits for the creation of job opportunities and the unemployment rate. We have acquired the data about the amount of the benefits for the creation of job opportunities from the annual reports on the provision of state support. The number of unemployed people has been acquired from the Eurostat data.

Figure 4: Dependency between expenditure on job creation in the automotive industry and the number of unemployed for the years 2008 to 2014

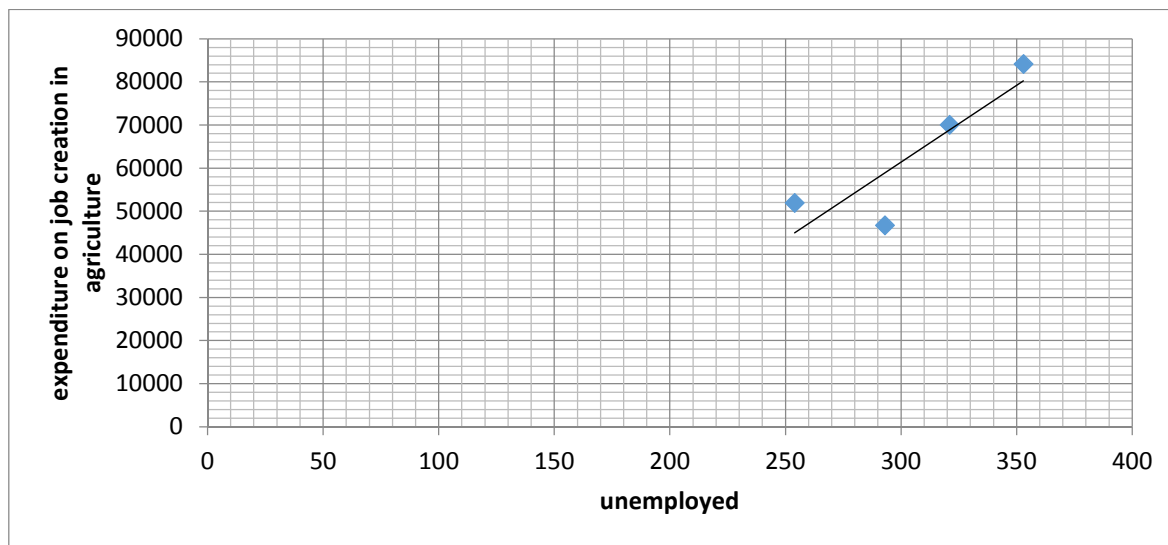


Source: Own processing, data from Eurostat 2016

The value 0.74 indicates that the interdependence between expenses for the creation of job opportunities and the unemployment rate in the automotive industry is quite high. However, the expenses for the creation of job opportunities have been declining during the last two years. Since this is just one of the forms of support, the state support for the automotive industry focuses on other areas, especially on tax relief.

The sector of agriculture is the most supported sector in Slovak Republic as far as state support and support from the European Union goes. According to the empirical analysis a significant portion of the funds focuses on the pre-accession program for the development of agriculture and rural development in Slovak Republic by using panel data. (Zubek, 2015) Support for agriculture in Slovak Republic is realized mainly from the resources of the European Union via national programs. The data on the amount of the expenses for the creation of job opportunities have been acquired from the state budget. The relevant data on the amount of support for the creation of job opportunities in agriculture from 2011 until 2014 are freely accessible but as far as the previous years went it wasn't possible to clearly define the amount of support given for the creation of job opportunities. In this case we should again research the interdependence with the unemployment rate, but only for the period in which it was possible to determine the amount of support given.

Figure 5: Dependency between expenditure on job creation in agriculture and the number of unemployed for 2011-2014



Source: Own processing, data from Eurostat 2016

The value 0.87 indicates that the interdependence between expenses for the creation of job opportunities and the unemployment rate in agriculture is quite high. The points in the chart show that if the support provided for the creation of job opportunities is higher, then the unemployment rate will also be higher. It is however necessary to note that a longer time period would enable a better analysis of the interdependence.

4. Conclusion

Based on the resulting analysis we can state that the support given for the creation of job opportunities and the unemployment have a greater interdependence in agriculture than in the automotive industry. The sector of small and middle sized businesses uses a different set of rules as far as support goes. (Kuzibkova et al., 2015) Our result is influenced especially by the form of support that the automotive industry and agriculture can draw from. Both sectors are supported by the state and by the European Union, via national programs. However, the automotive industry has a significant disadvantage when it comes to national programs. The aforementioned restriction has reflected itself in the analysis of the interdependence between the unemployment rate and the amount of support for the creation of job opportunities. On the other hand the automotive industry has recorded an increase in the amount of job opportunities.

We can clearly say that each state has an interest to promote the production of higher added value, but also to ensure food self-sufficiency. Both sectors are from the state supported, but agriculture is reflected in the higher degree of the unemployment. The reasons may be especially in the higher attractiveness of the automotive industry, but also a higher average wage, working conditions. The precise reasons for this it is possible to determine after a deeper analysis of the factors that lead to it. One of the trends that currently we are seeing in the automotive industry is the lack of a quality workforce. It may happen that the support of created working places, precisely in this segment, they will not draw the citizens of the Slovak Republic.

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***SESSION 2 Human, Social and Intellectual Capital in an Organization
Diversity Management***

Human Resource Management

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Abstract

The factors that helped increase the importance of human resource management as well as the establishment trade unions and their influence on employment and labour include discovering the significance of human factor in the development of business systems as well as the increase of the number of employees and the global economic growth. This research will introduce human resources and its main goals and perspectives, especially the role of human resources in preparing, developing and training.

Keywords: *Evaluation, Organizational objectives, Performance, Trainings and development*

JEL Classification: *O15, J54, M12, M54*

1. Introduction

Among the first steps towards the management of resources is the formation of trade unions by a group of craftsmen with the aim of improving their working conditions as a result of technological development. With the outbreak of the Industrial Revolution and the disappearance of the direct relationship between the owners of capital, companies and employees, the role of resource management became more emphasized in the eighteenth century. Recently, human resources management has become an essential element in companies and institutions, which aims to help increase the competitive position of the institution as well as its profitability.

1.1 Definition of Human Resources

Human resource are a group of people working in governmental or non-governmental institutions and organizations who deal with the management of employees based on strategies and methods pursuant to the laws and regulations with the aim of enhancing their performance. HR managers are responsible for solving employee performance problems and creating proper conditions for utilizing workers' skills in order to achieve goals taking the best interests of the parties into account.

Different management experts have defined human resources differently.

“Personnel management, or say, human resource management is the planning, organizing, directing and controlling of the procurement development compensation integration, maintenance, and separation of human resources to the end that individual, organisational and social objectives are accomplished”. Edwin B. Flippo

“HRM is concerned with the people dimension in management. Since every organization is made up of people, acquiring their services, developing their skills, motivating them to higher levels of performance and ensuring that they continue to maintain their commitment to the organization are essential to achieving organizational objectives. This is true, regardless of the type of organization-government, business, education, health, recreation, or social action”. Decenzo and Robbins.

A part of management which is concerned with people at work and with their relationship within an enterprise. Its aim is to bring together and develop into an effective organisation of

the men and women who make up an enterprise and having regard for the well-being of the individuals and of working groups, to enable them to make their best contribution to its success”The National Institute of Personnel Management (NIPM)

1.1.2 Core Functions of Human

Resources Department:

Analysis and management the scope of work. Proper planning taking into account human resources needs of the organization. Hire employees and place the right person in the right place. Train, develop and provide guidance to employees. Set wages and salaries and determine proper bonuses and incentives. Assess employee performance. Finally ensure a safe and healthy workplace.

Human Resources Planning:

A process by which the workforce needs of the company can be predicted, in addition to gaining information about manpower demand and supply in order to bridge the gap between them. The importance of planning lies in the following features:

Supply effective, efficient and high-performance manpower. Supply workforce with a desire to perform. Create a fair personnel selection system.

Objectives and functions Of Human Resource Planning:

Assist labour organizations to identify critical workforce segments. Achieve a balance between workforce supply and demand. Sufficiently improve the productivity of the organization which cannot operate efficiently when facing a surplus or shortage of manpower. Optimal use of human resources to increase level of satisfaction with the work, Increase competitiveness of the organization by predicting labour costs including wages and salaries. Plan and adjust promotions and job changes (resignations and retirement). Estimate human resources costs and prepare related budgets, Face technical technological and social opportunities such as changes in machinery, in the end Reallocate workforce in the entire organization.

1.1.3 Training and Qualification of Human Resources

Management training these days is a key topic for managers due to its direct impact on the productivity, sufficiency and development of human resources. Training has occupied a leading position among the priorities in many industrialised and developing countries, as it is one of the most important ways to establish an efficient administrative body, fill the gaps and overcome the deficiencies of the administrative competencies in order to enable those countries to bear the burdens of economic and social development.

Management trainings aim to equip trainees with information and different renewable skills and methods related to their job, to improve and develop their skills and abilities, and try to change their behaviour and attitude to positive, and raise the level of performance and efficiency at the same time. Studies show that the return on education and training may be three times greater than the amount of money invested in various business activities. A study carried out in the Soviet Union suggests that training illiterate people for a period of one year has contributed to increase their productivity by 30%.

The concept of training:

Training includes a group of activities that allow the members of the organization to be ready and prepared permanently and possess advanced skills needed to perform their current and future jobs. In other words, training is a continuous organised process that provides individuals

with knowledge, skills, abilities, attitudes and ideas which are necessary to carry out the tasks delegated to them or achieve a specific goal with the aim of increasing employee efficiency.

Conditions and Features of a Good Training:

Designed to achieve specific goals agreed upon previously, Then accumulative and future-focused: meets the needs that arise during the stages of the employee's performance progress, After that gradual: begins with general knowledge and moves towards more specialized studies from very easy to more and more difficult things, adjusted to the abilities of individuals, Then complex and flexible: keep pace with technological changes, Also comprehensive: covers all human capacities (knowledge - trends - skills), Finally practical: meets the requirements of the position.

Basics of Training:

Technical basis: includes the characteristics of the work performed by the trainee, different functions and aspects of scope of employment, problems, challenges, requirements and needs, the effects of success at work as well as performing functions as efficiently as possible.

Psychological basis: based on studying psychological characteristics as well as social-emotional skills (trends, values, degree of readiness and motivations) to determine teaching methods of the program. Social basis: based on studying lifestyle, values, customs, and political, economic and social objectives.

Types of Training:

The most types of training are basis of the position of trainees (workers, supervisors, employees, leaders). Also basis of training period (before starting a new position, during performing daily work). Finally basis of training purposes (qualification, specialization, enhancing performance, raising competence, etc.).

Key Challenges Facing Training and Development:

Senior management is not convinced of the importance of training programs. Unwillingness of employees to attend training programs because they believe they already possess the necessary skills and experience, and they are reluctant to go back to school. Lack of integrated strategy that combines training, moving policy, promotion and workforce planning. Lack of financial resources (places and halls, etc.), human resources (trainers, etc.), insufficient financing of training programs. Lack of the evaluation of training programs and results achieved. Inability to develop training programs or set new program plans. One of the big Challenges is the conflicts between the level of modules and training departments.

Characteristics of Successful Training Policies and Plans:

The dynamism and flexibility in the system of training programs in compliance with scientific and technological variables is very important. Also the continuous of qualification process to develop human resources. Training programs, tools, devices and methods keep pace with technological changes. It is necessary to meet the various needs of enterprises and projects in different fields of expertise which are not fulfilled by education. Also the actual basic needs of the market and work environment are taken into account.

2. Data and Methods

The qualitative approach used in the paper relies on theories of certain researchers and case studies related to human resources.

3. Results and Discussion

Human resources aim to provide guidance and advice to executives in all aspects related to employment by assisting them in policy-making and management, and find solution to problems that the company faces. HR specialists contribute to the assessment of efficiency and effectiveness within the organization by measuring efficiency of performance and commitment to work. They help executives detect problems and difficulties that affect the performance of employees and the organization's effectiveness. They carry out procedures such as preparation and creation of the staff, management of wages and salaries, scopes of work and services, in order to ensure the highest performance and productivity.

They help achieve coordination between the activities of employees and executives of the organization by discussing these activities with the executive departments.

4. Conclusion

HRM can be defined as a process of procuring, developing and maintaining competent human resources in the organization so that the goals of an organization are achieved in an effective and efficient manner. HRM is an art of managing people at work in such a manner that they give their best to the organization for achieving its set goals. Importance of human resources management occurs daily in workplaces.

Training and development concerned with organizational activity aimed at improving the job performance of individuals and groups in organizational settings.

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Assessment of the level of burnout syndrome among managers depending on the gender of the respondents

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Abstract

Feelings of lack of energy, loss of initial excitement at starting work, constant professional pressure and contact with people, can cause fatigue, long-term stress, mental and physical imbalances to employees. Due to mentioned factors men can gradually reach up to a state of total emotional aridity and burnout. The aim of the research study was to evaluate the degree of burnout syndrome according to the sex of the respondents. The research sample consisted of managers at various levels of management from different sectors of the economy with a total of 75 persons. For collecting qualitative data, we used the technique of the questionnaire survey (standardized questionnaire Burnout Measure – BM). Response rate of the total survey sample was 62 questionnaires, including 36 men and 26 women. The average rate of burnout among the men reached the stage BQ - 2.71. The overall average rate of women reached the burnout stage BQ - 2.86. The survey showed that the value of burnout was higher among women's groups. We assume a higher correlation with psychological stress to the fulfilment of demanding a life role in women life. The facts will be interpreted within the educational process, with a focus on promoting preventive measures.

Keywords: burnout syndrome, managers, psychological stress, prevention, sex of respondents

JEL classification: E240 0180

1. Introduction

Burnout syndrome was first described by clinical psychologist Herbert J. Freudenberger in 1974 in New York. Later, in 1976, the psychologist Christina Maslach from University of California began to explore this phenomenon, too. (Marečková&Valenová, 2000). Křivohlavý (1998) states that the word "burn" is a symbolic expression of a person whose heart is inflamed for something, or becomes passionate to. Like fire, our anxiety for something can also flare up more and more, or, conversely, it can go out.

Psychologists and medical doctors have been studying the problem of massive mental exhaustion for the past more than 25 years. And they found out that due to the burnout syndrome, certain changes occur in the cognitive, motivational and emotional sphere of the personality. The consequence of this phenomenon affects not only the attitudes, opinions and efficiency of a person, but also the whole formula of his/her professional conduct. (Kebza&Šolcová, 1998). In the process of burning out, it is important to take into account the individual characteristics and traits of each personality, since each of us reacts differently to the situations we face (Hall, et al., 2002). Excessive and long-lasting work-related stress, exposure to emotionally difficult situations, as a rule, lead to the mental and emotional exhaustion of employees (Maslach, 1993). Organizations may face organizational stress, which is considered one of the main factors affecting the level of employee satisfaction (Kumar, et al., 2007). From this point of view, it is not only important individual behavioural changes by individuals, but also the approach of the employer in terms of improving working conditions in companies (Butter, et al., 2001). Very often, burnout syndrome is associated with so-called helping professions, such as a medical doctor, a nurse, a psychologist, a policeman and a teacher.

However, nowadays it can also occur in various other professions, which require a lot of psychological and emotional input, too (Gabura, 2005).

The aim of the research was to compare the rate of burnout syndrome depending on the gender of respondents among managers. We were based on the assumption that the women in today's hectic world are loaded with a greater amount of roles than the men, and thus are also more emotionally laden than men.

2. Data and methodology

The selection of respondents was conducted in the area of health care, construction and banking sector. The research sample consisted of managers from middle and top management from various areas of the economy, in the Nitra region by managers of the building production, doctors and nurses who worked on manager positions at hospitals, managers of banks operating in the Bratislava region.

As part of the survey the necessary data was collected by using a strategy of quantitative inquiry. As a technique, a questionnaire survey was used. The data obtained through the questionnaire were evaluated by mathematic - statistic methods. A standardized instrument was applied-questionnaire BM (Burnout Measure) –psychological Burnout (Pines& Aronson, 1981). Burnout Measure instrument was used to determine the general exhaustion of the body/organism. They were examined three aspects of mental exhaustion - feelings of physical exhaustion, emotional and mental exhaustion (Křivohlavý, 1998). The questionnaire consisted of 21 items, each of which was evaluated on a seven-point scale (from 1 – never, to 7 - always). Each scale represented a frequency of each feeling. The evaluation of the burn-out rate was determined by the coefficient BQ (burn-out coefficient) based on the manual of Křivohlavý (1998). By the BM method the overall degree of burnout among respondents was found.

Sociodemographic data were subjected to the evaluation for the analysis and the comparison, and were subsequently processed and interpreted on the basis of the arithmetic mean and percentage evaluation.

2.1 The return of questionnaires

75 questionnaires were distributed by E-mail. Managers from the mentioned areas of the economy responded in 86.20%, in the number of 62 completely filled out anonymous questionnaires.

Table 1: The return of questionnaires

Area of economy	The number of questionnaires posted to respondents/ pc	Return of questionnaires /pc	Return of questionnaires in %	Return of questionnaires from total samples in %
Construction	25	23	92.00	37.10
Banking	25	18	72.00	29.00
Health service	25	21	84.00	33.90

Source: author's own processing

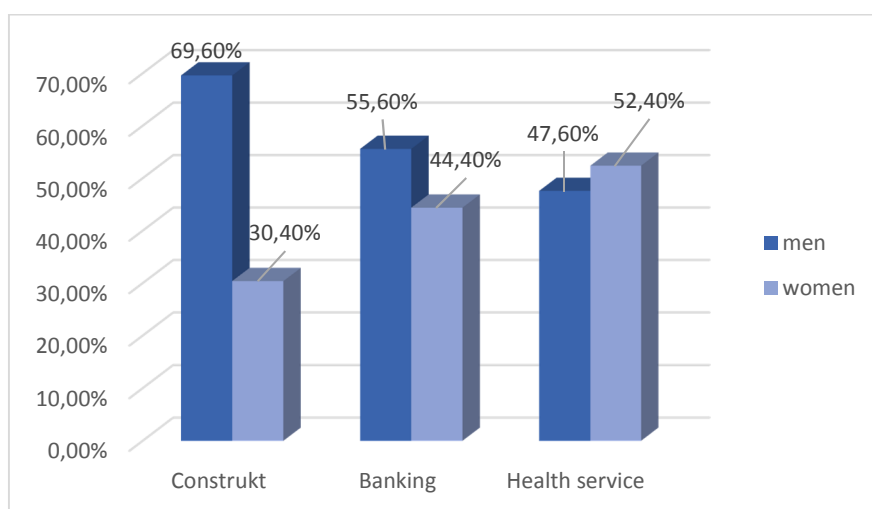
3. Interpretation of the results of the research and discussion

The results of the survey were then processed and evaluated. The total sample of respondents was selected by combining the managers from middle and top management. Justification for this step is the creation of a larger group of respondents, given to the low number of managers at various levels of management.

3.1 Evaluation of the identification data of the participating respondents

Within the total research sample of 62 respondents featured 36 men, representing 58.10%. Women were recorded in the manager function 26, in percentage terms; this represents a value of 41.90%. In the area of construction, there were dominated in management positions males by the number of 16 people, representing 69.60%. A smaller group was created by women, 30.40%, in the number of 7 persons. In the banking sector held the managing positions 10 men, corresponding to 55.60% and 8 women that is 44.40%. In health care was the rate almost similar. Men managers held 10 seats, which is 47.60% and women 52.40%, which accounted for 11 seats.

Figure 1: Representation of the respondents by the gender



Source: author's own processing

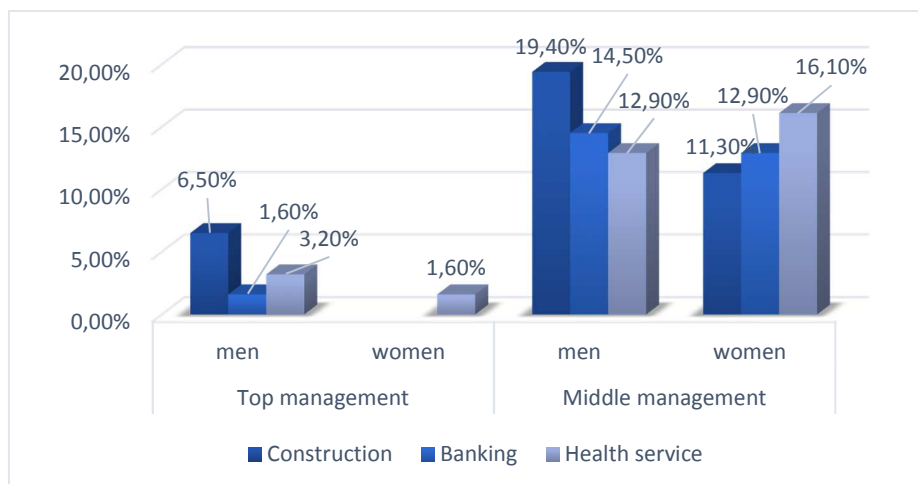
The total research sample was composed of managers working at top and middle management. As part of the top management was employed 8 persons, representing 12.90%. 54 people was working on the middle level management, which corresponds to the value of 87.10%. A majority of the managers were from middle management. Top management women worked only in the health sector. Women from health care in the total sample held the most middle management positions.

Table 2: Comparison of the number of male and female managers working at top and middle management

Area of economy	Level of management	Men in %	Women in %
Area of construction	top management	6.50	0.00
	middle management	19.40	11.30
Area of banking	top management	1.60	0.00
	middle management	14.50	12.90
Area of health care	top management	3.20	1.60
	middle management	12.90	16.10

Source: author's own processing

Figure 2: Comparison of the number of managers working at top and middle management in terms of gender



Source: author's own processing

Within the both management the levels of education of respondents reached 96.80% and second level of higher education.

3.2 Evaluation of the degree of burn-out (BQ)

By evaluating the degree of burn-out depending on the gender of the respondents, which work as a manager, was the assumption that women will achieve a higher level of mental exhaustion due to the implementation of more demanding role in life than men. Often they occupy simultaneously role of wives, mothers, educators, cooks, cleaners, daughters, colleagues, managers and friends.

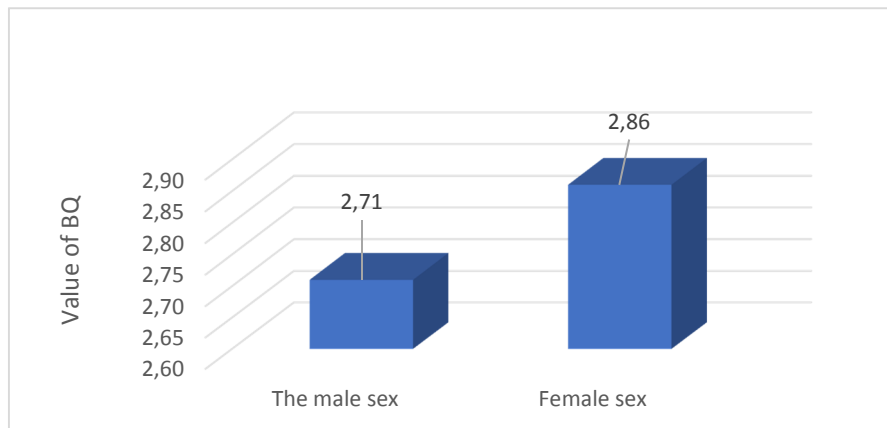
Table 3: Interpretation of the results of the BM questionnaire

Value of BQ			Evaluation of mental health
BQ < 2	or	BQ = 2	good
BQ > 2	or	BQ = 3	satisfactory
BQ < 3	or	BQ < 4	recommendation - to review the scale of values
BQ = 4	or	BQ < 5	the presence of burn-out syndrome
BQ = 5	or	more	signal for critical scale

Source: Modified by authors according to (Křivohlavý, 1998)

The overall research sample was represented by 36 men and 26 women. Burn-out rate among men stood at the average BQ - 2.71 and for women BQ stood at 2.86. It follows that women showed in average BQ value higher degree than men. Women achieved a higher level of mental exhaustion than men, but only in a small extent.

Figure 3: The average level of burn-out rate by gender

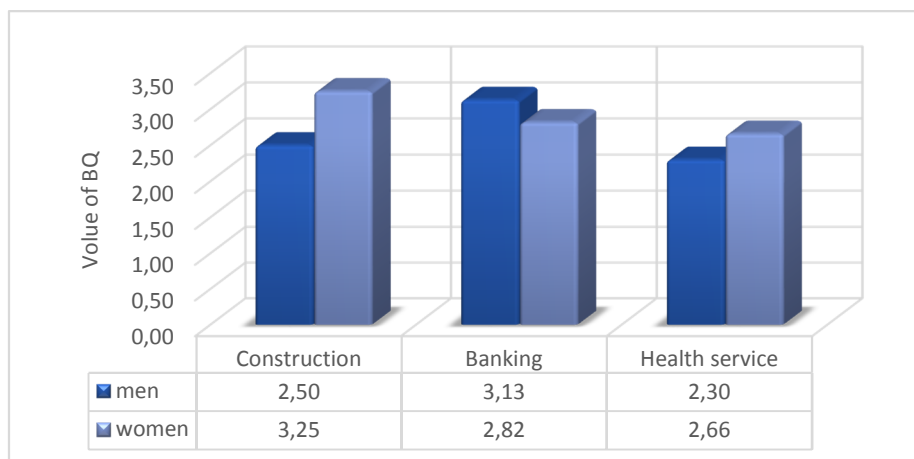


Source: author's own processing

In the next phase of the research, we compared the level of the rate of burn-out syndrome among managers on the ground of sector of the economy.

- In the construction sector women reached a BQ value of 3.25 and men 2.50. In this case, we demonstrated that women achieve a higher level of mental exhaustion than men.
- In the area of banking the opposite condition was proven than by constructors. Higher degree of burn-out was found on average by men, where BQ reached the value of 3.13 and in women slightly less, where BQ was 2.82.
- In the health care, the average BQ height by women was 2.66 and by men only 2.30.

Figure 4: The average level of burnout rates by gender in different areas of the economy



Source: author's own processing

The comparison of the results from different areas of the economy showed that the highest rate of burn-out is reached by women in the area of construction, with the average BQ - 3.25. Men are most overloading in banking sector, where the average BQ is at 3.13. The total average burn-up for the entire study group reached BQ - 2.78.

3.3. Discussion

Burn-out syndrome is a problem that has been occurring mostly by the people who worked in so-called helping professions. In recent years, many studies, which were conducted, showed that other professions are exposed to this unfortunate phenomenon. The largely working with people, high workload, constantly accelerating time due to information technology and also

poor family and private facilities can cause burn-out of the personality. Psychological stress can lead to an overall lack of interest in work duties and affairs of the outside world. Gradually, by humans appear manifestations of cynicism and these can lead to a state of total exhaustion of energy reserves of the individual.

In the research we looked at a group of managers from the area of construction, banking sector and health care. We wanted to compare the rate of burn-out among managers of health care and other areas of the economy in relation to the gender of the respondents. We assumed that for managers working in the health care will burn-out occur in the highest degree. This assumption was not fulfilled. While evaluating the factor of gender of respondents, we found out that among health care professionals were measured the lowest values of BQ for both, men and women, compared to the other groups of respondents. Women achieved BQ value - 2.66 and men BQ - 2.30. The highest average levels of burn-out rate reached women in the construction industry, where BQ was at 3.25. The highest BQ value - 3.25 was found in the group of women working in the construction and in males the highest BQ value - 3.13 was found by managers who have worked in the bank.

Hospital staff justified the lower levels of burn-out improvement of the situation in the hospital. They reported that there was a positive change after the exchange of persons on the positions of top management, which resulted in improvement in the working conditions, communication and working atmosphere. Important was also the assumption of expected positive changes.

Managers, who experienced greater mental stress at work, reported increased stress in dealing with conflict situations in the context of interpersonal relationships, heavy workload, low ethical and financial rewards. According to the previous findings, the relationship between burn-out and gender is ambiguous. Some studies have shown a burn-out more often in women than in men (Bakker et al, 2002). In other studies it has shown that burn-out has been affected more men than women (Price & Spence, 1994), depending on the impact of organizational and professional factors. Khan & Zafar (2013) investigated the rate of burn-out among Pakistani managers from different areas of the economy. They focused on a comparison of values of burn-out among managers from developing countries, where the personal policy is not developed enough. The resulting values were compared with managers with countries with developed economies in the US, Spain and Italy. There was selected the group of organizational factors, where were included workload, management, rewards, community, justice and the value of the employee. When comparing the genders, there was significantly higher degree of burn-out demonstrated in women. The lower level of burn-out was demonstrated in lower management. Top management had the lowest burn-out. By the elevated results of burn-out syndrome was pointed out the high competitiveness in staffing, lack of economic, political uncertainty, high workload.

In the health care sector, a similar study was carried out by Heeb and Haberey-Knuessi (2014), which described the overall burn-out among medical staff from western part of Switzerland. There were measured a low values of burn-out by doctors and nurses, working on the manager positions. A low degree of emotional exhaustion and depersonalisation was detected by the respondents. A high degree of burn-out was confirmed only in small percentage of respondents (2.30% cases). Similar research in the health care sector took place in Canada. The study was aimed at determining the rate of burn-out among top managers working in the health care sector. Healthcare managers have worked mostly at the teaching hospitals in the departments of internal medicine. In a research sample of respondents was demonstrated burn-out syndrome at a higher rate than by Swiss colleagues. The average rate of burn-out stood at 28.70%. The

domain of emotional exhaustion was struck in 37.00% and depersonalization was demonstrated at 10.40% (West et al, 2013).

The results of our research BQ ranged from 2.30 to 3.25. By interpreting the results of the BM questionnaire the state of mental health in a range of values BQ 2-3 is considered to be satisfactory. Author recommends by the BQ values higher than 3 and less than 4, think about the meaningfulness of life and work and to reconsider the scale of values. If the BQ values are higher and a person cannot help himself in a difficult psychological state of mind, must seek the help of experts in psychology and psychiatry.

4. Summary

Burnout syndrome is a phenomenon of our times. In addition to the primary causes such as stress and lack of fulfilment of our expectations, burnout is also interdependent on the sense of our own self, own personality. The imbalance between our expectations and the real situation can even bring us to a state of total mental and emotional exhaustion. In this sense, the mostly affected are those who interact and deal with other people and have a great responsibility for themselves and others. This, of course, primarily includes people who work in managerial positions. With this in mind, we primarily focused our research on mid-level and senior managers of the construction, banking and healthcare sectors.

In the survey sample of managers was burnout syndrome due to gender demonstrated only in isolated cases. Our assumption that the highest degree of burnout would occur among department heads and senior nurses in hospitals has not been confirmed. The highest BQ values among the women managers have been found in the areas of construction, and the highest BQ values among the men managers have been found in the areas of the banking sector. Increased psychological stress is manifested by the fact that the people feel less and less joy in carrying out their work, which causes irritability, nervousness, somatic problems, and uncontrollable anger. As a consequence, these people do not have enough strength to deal with routine work and family issues.

As in any other health problems, the prevention is paramount in burnout syndrome, too. It depends on us, how we perceive and react to the negative incentives of our environment. Sometimes we even need to learn to think differently. It is important to sort out what is important for us and what is not. Priority is to establish a scale of values, learn how to deal with non-essential things. According to Schmidbauer (2008) men must have fixed internal borders of work duties because it threatens to burn just those who have not learned to distinguish perfection of realistic claims - (I didn't get the meaning of this sentence, too).

In the work team, such things as support from colleagues, optimistic mood, continuous efforts to improve working conditions, exemplary behaviour and to a large extent effective communication play a very vital role. Enough rest and fresh air is also one of the important components of improving the mental state. In a domestic environment it is important to prioritize and reallocate the domestic duties among family members.

Based on our results, we can conclude that both sexes, men and women, are subject to burnout syndrome. It is very important to establish a balance between professional activity and family life, work and leisure.

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The role and importance of social capital in crisis management in the system of national security management

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Abstract

The concept of social capital emerged at the beginning of the 20th century and meant investments in humans connected with raising and education. Later, this term was understood as a network of social relations between people and used for the analysis of the development of Afro-American societies. In the eighties of the last century, its effect on the development of the civil society was demonstrated in Italy and the USA. The most recent concepts include the approach presented by F. Fukuyama, who found that social capital means people's ability to cooperate within groups and organizations in order to achieve common goals. The concept continues to be developing and seems to be useful in the analysis of capitalist social systems. This paper attempted to indicate the role and importance of social capital in crisis management in the system of national security management with the example of volunteer dispositional groups. Nowadays, this concept also concerns actions taken by public administration facing any military and non-military threats, consisting in making right decisions and coordination of forces and resources allocated for crisis response.

Keywords: social capital, national security system, crisis management

JEL Classification: M51, M54, O21

1. Introduction

Human is a social being, living and interacting with other people in order to meet and realize their own needs and goal which could not be achieved alone. While living with others, people organize teams, communities and associations by establishing organizations where specialization and labour division are developing. Good interactions between people are connected with positive cooperation with each other, which depends on two principal determinants of objective and subjective nature. Objective determinants are united with structural and functional factors present within a social structure. This means its organization, methods and performance of a particular structure. Furthermore, subjective determinants mean people operating within the structures i.e. their competencies, commitment and creativity, and, first and foremost, the ability of positive collaboration.

Performance of any social structure depends on quality of people who form the structure and how they act. It should be noted that this quality depends both on life experience connected as a result of cooperation with other people, the degree of identification with the values respected within a structure and the level of respecting the standards adopted in the structure. This quality of people is not formed by itself. It results from specific investments made by the managers in the organization, connected with their preparation to effective acting i.e. acquisition of adequate competencies. Therefore, investing in people is reflected by increasing the costs connected with activities aimed at improvement in their abilities and, consequently, the value of specific people. Attracting the attention to the determining effect of people in achievement of the goals of individual social structure led to the emergence of the concepts of social capital in 20th century.

This paper attempts to indicate the role and importance of social capital in crisis management in the system of control of national security with the example of volunteer dispositional groups (Bsoul-Kopowska, Karczewska, 2016). From the contemporary standpoint, the concept

concerns the actions taken by public administration facing any military and non-military threats and external and internal threats, consisting in making right decisions and coordination of forces and resources allocated for crisis response.

The concept of social capital introduced by R. Putnam was popularized with his study titled "Making Democracy, Work: Civic Traditions in Modern Italy" published in 1993. According to Putnam, social capital is linked to social trust, the generally accepted norm of reciprocity (Latin: *facio ut facias*) and participation in voluntary associations where the norms of reciprocity, loyalty and social trust were nurtured and extended.

Slightly different understanding of the concept of social capital was proposed by Pierre Bourdieu, who argued that in addition to the capital in economic terms (money, land, production tools etc.) and cultural capital (knowledge, cognitive competencies etc.), there is also a social capital, formed through association activity and including all the resources that result from a permanent network of mutual interrelations and based on mutual knowledge and familiarizing with others within specific social structures. According to this researcher, social capital represents a set of actual and potential resources which are connected with the membership in the group, offering support to each member using the capital owned by the collective they form.

With social capital inherent in any human being and subjectively varied, participation in the social and cultural capital differs from person to person. Therefore, the researcher found determinants of social inequality in the social capitalism and, with particular focus on non-obvious and informal networks of the relationships.

Another stage in the development of the concept of social capital is connected with explorations of Francis Fukuyama, who emphasized social capital as an ability to cooperate with other people within groups and organizations in order to achieve common goals. Therefore, the substantial part of the human potential means human ability to connect in groups in order to achieve a specific goal. In another study by Fukuyama, the author defines social capital as a group of informal norms and values respected by the members of a specific group that allow them to cooperate effectively. The norms that form social capital are based on such values as honesty, sense of duty and reciprocity in relations with others.

Members of groups expect honest behaviour, i.e. the behaviour that makes people trust each other. Trust becomes the most basic value which facilitates functioning of the groups and organizations.

Fukuyama also stresses spontaneous social behaviour that manifests itself in development of new organizations and associations operating according to the adopted standards which are also the essential part of the social capital.

Fukuyama emphasized that social capital means an ability resulting from trust developed in a society or its part. It can be considered with respect to the whole nation, whole intermediate groups and as a characteristic of the family as the most basic social group.

Previous explorations concerning the concepts of social capital lead to the conclusion that it represents an analytical category which is worth analysing and can be useful in the examinations of the development of the capital system, especially at its higher (contemporary) stage of development. Social capital is essential for effective functioning of contemporary economy and is the prerequisite (Latin: *conditio sine qua non*) for a stable liberal democracy. It is the cultural component of contemporary society which, since the Age of Enlightenment, has been developed based on formal institutions, legal regulations and rationality. This paper attempts to determine the role played by social capital in crisis management in the system of national

security management. Social capital is understood to mean executive entities in crisis management, including military, paramilitary, civil and volunteer systems that participate in crisis management. This paper was written based on the analysis of the documents and studies concerning the problem discussed in the study.

2. Data and Methods

The problems of measuring social capital are much bigger than usually are in social science and stem from its very essence. The lack of a theoretical basis results in a multitude of definitions, which causes a multitude of measures of social capital. In the absence of theory (we do not know exactly what social capital is) it is impossible to say whether the measures of social capital measure what they should measure.

Social capital has all the qualities of a tautology. According to the supporters of this concept, a social group is successful because it has got higher social capital, and this success is an evidence of higher social capital. In our study, we adopted the definition close to Putman - social capital is the sum of mutual trust, of which one of the main indicators is participation in voluntary organizations and the measures of generalized trust (which is the trust in wider circle of unknown and less known people).

Due to the many dangers, the society takes up specific preventive measures. Preventive, prophylactic, defensive, rescue and protective functions are mainly fulfilled by the so-called dispositional groups. The definition of this term has lately come into being in sociology and refers primarily to "uniformed formations" such as: Army, Police, Fire Brigade, Emergency medical service, etc.

In view of the above, the purpose of the study in this article was to determine the level of trust of the Polish society to the Fire Brigade in relation to other institutions which also serve the society ensuring a sense of social security, based on the method of analysis of documents. It is assumed that the Fire Brigade enjoys one of the highest levels of trust compared to the other institutions used in the study.

The authors of the article used the method of documents' analysis based on the CBOS and ETB research institutions' reports. The article analyzed the documents consisting of data collected by the survey method. This is a quantitative method of research concerning social opinions formulated in relation to various phenomena of public life. Survey polls were conducted on the representative samples of over one thousand respondents (nationwide surveys) to over 27,000 people surveyed (European Trusted Brands pan-European survey). While analyzing the social level of trust towards the Fire Brigade, we refer to representative national research and then compare them with research from international surveys.

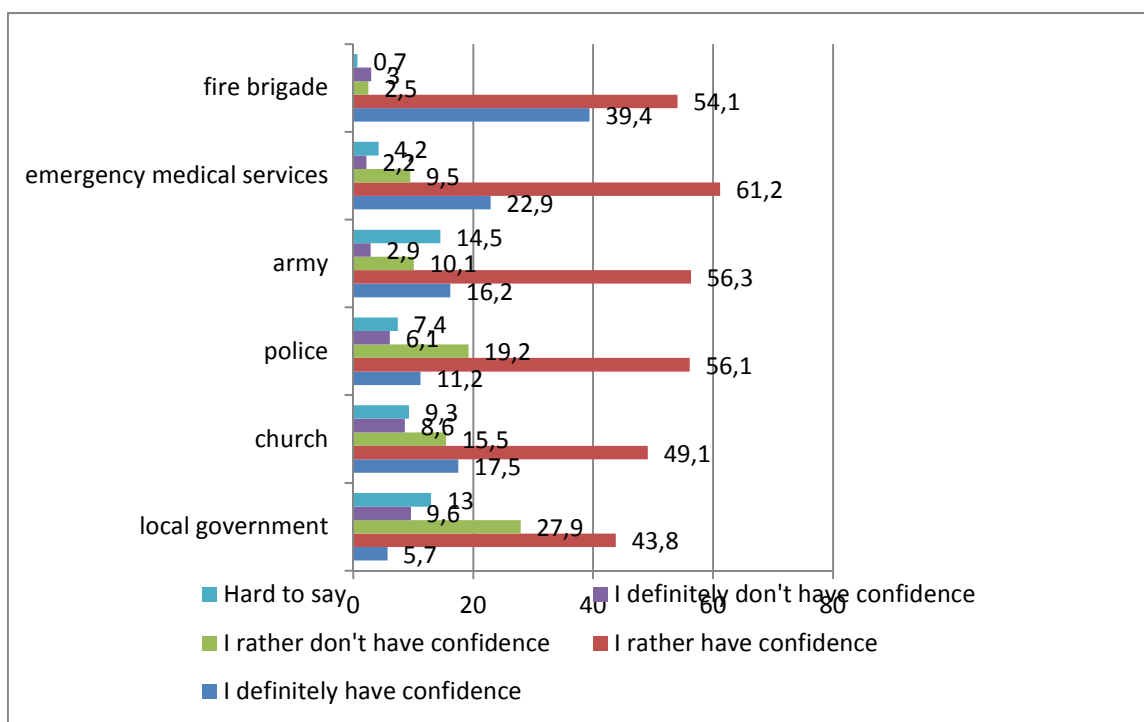
3. Results and discussion

The greatest confidence of the inhabitants of Poland in the first half of the year 2015 (the choice of the answers : "I have a lot of confidence" and "I rather have confidence") enjoyed the emergency services (http://www.cbos.pl/SPISKOM.POL/2013/K_164_13.PDF). Approximately 94% of people aged 16 or over declared the fire brigade to be trusted the most, while about 84% of the respondents had confidence in the emergency medical service. The level of confidence in the Army (over 72%) and the Police and the Roman Catholic Church was also high (around 67% each).

Reports from previous years confirm this trends of rising confidence to the firefighters. In 2011, TNS OBOP conducted a study showing the level of trust of the Polish society to the institutions that assure safety and public order in Poland – 89% of the respondents trusted in those

institutions (<http://www.tnsglobal.pl/archiwumraportow/2011/10/05/zaufanie-do-instytucji-publicznych/>). By contrast, the Police and the Army received respectively only 72% and 79% of indications. In the CBOS report 2013, around 87% of the respondents declared trust towards firemen and firefighters (http://www.cbos.pl/SPISKOM.POL/2013/K_164_13.PDF). The table 1 presents the level of trust to the major subjects connected with providing help and security.

Table 1: The level of trust (in percentage)



Source: GUS report 18/2016, *Zaufanie społeczne*, http://www.cbos.pl/SPISKOM.POL/2016/K_018_16.PDF (access: 05.07.2017)

The situation is similar throughout the whole Europe. In year 2009 Gfk Custom Research conducted an international survey concerning the level of confidence in the most important organizations and professional groups in the monitored societies (<http://www.gfk.com/pl/>, http://www.gfk.com/imperia/md/content/presse/pm_trust_index_june_2009_efin.pdf).

The opinion of the residents of 16 European countries and the USA on the trust granted to among others civil services, trade unions, clergy, charitable and environmental organizations and fire brigades were studied.

More than 17,000 people participated in the study. The highest rate of trust (taking into consideration aggregated data) was received by the fire brigade - 92% indications of respondents from all surveyed countries; the highest percentage was in Sweden - 98% of indications. Representatives of subsequent professions placed in the ranking included: 85% of indications to teachers and 81% to physicians. While the lowest indicator of confidence was in the case of politicians - 18% of indications.

Further international surveys from earlier years confirm high levels of trust to fire brigade service. The results of a pan-European European Trusted Brands opinion survey of 27,000 people from 15 countries show that 93% of respondents trust them (http://bitp.cnbop.pl/wp-content/uploads/2016/02/BiTP_Vol.36_Issue_42014pp.49-57_01.pdf). European Trusted Brands - is a cyclical enterprise that aims to diagnose social problems, including the level of

trust in various institutions. For comparison, doctors received 64% of the indications and nurses - 74%. They had lower results in Poland than in the analyzed ranking. In Europe, the average level of trust towards doctors is 81%.

Summing up the above-mentioned research findings, it is important to note that the trust of citizens is of particular importance in the context of those professions whose job is to give them a sense of security. The greatest trust is given to professions directly related to the protection of health and life.

In the conducted research, among the most frequently mentioned advantages of the fire brigade were: speed and effectiveness of work, good organization of work, efficiency and willingness to work, and above all voluntary dedication to others.

All the above-mentioned features have a huge impact on building trust and confidence in the citizens. The conduct of firefighters, both from the State Fire Service as well as the Volunteers, makes the citizens consider them to be incredibly brave and ready to help others.

The Fire Brigade is also the only one from the interview with no negative feedback. The only damage to the image is old equipment, which firefighters still have to use. However, it also changes over the years. New vehicles were provided not only to the units of the State Fire Service but also to the Volunteers. In earlier years thanks to the cooperation of the Ministry of Internal Affairs and Administration and PZU S.A. nearly 200 new cars were delivered to the Voluntary Fire Brigades throughout Poland.

The CBOS survey from year 2013 also shows a lowered level of Poles' confidence in the police (http://www.cbos.pl/SPISKOM.POL/2013/K_164_13.PDF). According to the report, only 53% of the respondents grant more respect to police officers. Lack of confidence in the police may be related to the emerging reports of abnormalities in the functioning of this service: the frequently reported allegations of bribery and dishonesty.

The fire brigade on the other hand is not considered as a sphere of corruption or nepotism at all. Firefighters are also not charged with dealing with trivial matters. Removing cats from the roof, wasp nests from the arbors or swans frozen to the river's flocs by the firefighters is received positively by the public.

The basis for ensuring sovereignty and independence of the country is efficiency of its structures, both governmental and in local governments, which are responsible for ensuring security in all areas of state activities, directly affecting its existence as well as well-being of the citizens. Therefore, it seems justified to link security in the country to the *national security system*.

The area connected with national security relates mainly to adjustment of both state and self-governmental structures to prevent any threats to the state and prepare society for adequate behaviours in situation where external threats emerge, especially those of political and military character.

Overcoming crisis situation that emerge in the macro scale have to be faced by public administration entity at the state and voivodeship level due to their competencies and means they are allowed to use. Therefore, they are responsible not only for the decision-making but also for supervision of activities and choice of resources and means that can be involved in a particular case of the crisis management. Therefore, crisis management at this level of activity represents an important component in the system of managing national security.

4. Conclusion

Volunteer dispositional groups that are present in the above mentioned organizations have to meet the conditions they are required during registration in order to be assigned specific powers. They are also prepared for taking independent actions within the powers they were assigned, and to cooperate and collaborate with other dispositional groups within military, paramilitary and civil systems. Therefore, they represent an important link in the structure of institutions that protect the state and society from various threats.

In terms of crisis management, cooperation and collaboration of these groups needs utilization of the strengths and resources owned by all the above entities that take part in rescue activities. With this cooperation and collaboration, their potential for rescuing life and health of people, their property and natural environment can be enhanced.

This cooperation should consist in addressing such problems as the method, time and place of using the powers and resources in order to perform specific tasks immediately and effectively. The focus of this cooperation should be on joint coordinated actions of the entities that participate in achievement of individual tasks that concern security, and human health and life protection in case of emergency.

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Challenges in management of employees' ethical attitudes

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Abstract

For centuries (since at least Socrates - V century BC), and particularly in the Middle Ages, the question of the way in which values functioned was questioned. There was a growing controversy of objectivists vs. relativists. The objectivists have stated that values are universal, and therefore the same for all people (the same values are respected and despised by all). Relativists, in turn, recognized that everything is subjective (depending on personal preferences and needs) and relative (has value, but only with other factors). This dispute has not been resolved. Disputes on this subject continue to this day, although they do not create conflicts like in the past.

The aim of the paper is to discuss the theoretical assumptions of the objectivist and relativistic viewpoint, and to try to determine, based on the results of the research, which is more often represented by the employees. This will allow us to determine the morality of the studied population, which is to determine what it depends on, what is appreciated, what is acceptable and what is unacceptable, and whether the researched staff is inclined to bend the rules in the name of ad hoc benefits. Defining these ethical standards has important implications in the management of people and should therefore be an important aspect of personnel management.

Keywords: objectivists, relativists, ethical attitudes

JEL Classification: D23, M14, O15, M59

1. Introduction - Concepts of the origin of moral values

Both objectivism and relativism are theories that refer to human value. Similarly to the sharing the science of philosophy into divisions (the theory of being, cognition, ethical and aesthetic values) we can talk about values: ontic - things / people, needed or useless (instrumentalism); logical-cognitive - truth, false; ethical - good, evil; and aesthetic - beauty, ugliness.

Values, as the name implies being valuable to a human being. Consequently, they must be protected from distortion or rejection. There are norms (rules, standards) that go beyond the norms of punishment (eg admonition, material punishment, detention, social ostracism).(Dion, 2012).

The proponents of the objectivist view claim that norms are absolute because of their reference to unquestionable truths and values (most often accepted in the so-called faith, or by the authority of god, gods, or other supernatural powers, for example) equal to all - the so-called objectivism. (Hołówka, 1979, s. 7)

The opposite is the relativism which does not recognize any supernatural forces that impose on man the order of things. According to this point of view, every man himself establishes what is valuable to him, more or less, or what is worthless (hierarchy of values). The perception of the

world by man is conditioned by his worldview based on needs and experiences (mainly in relation to the so-called external circumstances). Taking into account the above fact, the pluralism of worldviews, and thus the hierarchy of values and normative systems, is pluralistic. From this multiplicity of subjectivism a relativism arises that allows one to change a person's relation to value, taking into account changing circumstances (new experiences). Therefore, the relativist does not judge as easily and absolutely as the objectivists do. Nothing is certain because it is assumed that "tomorrow" can revise or completely change one's views. (Kiereś)

Ethics, as a philosophical study, deals with the theory of moral life, points to the need to implement certain values. However, to be able to properly identify what is valuable and worthy of human action, and what is not, it is necessary to answer the question: where do moral values come from?

Over the course of history, three posts have emerged that answer the above question: two extreme determinants of values within and outside the human being - subjectivity and objectivity; and third, indeterministic - relativism.

Axiological subjectivism assumes that values exist in the experience of the subject, ie, they are internal. Living is something personal, so a man will be the creator of values. Something is only valuable to a particular individual and there are no grounds to argue that others are experiencing the same value. (Hołówka, 1979, s. 10-11)

Proponents of this postulate emerged in ancient times among the sophists who claimed that the "confirming" and "opposite" sentences / behaviors are equally true / correct, just sufficiently to argue from their own / adopted points of view. In addition, they believed that moral principles were created through a social agreement, ie a common agreement, so they are variable (we can agree otherwise).

Nowadays, an interesting version of subjectivism (so called emotions) was presented by A. Ayer. He stated that human speech can be divided into descriptive and evaluative aspects. True or false statements can only be descriptive (they focus on facts), but ratings are not subject to the criterion of falsification, because they are based on emotions and internal beliefs, wishes (Sędlak, 2009, s. 100-101). Thus, it can be said that the subjectivists accept that moral values deriving from the personal moral experience (that experience), that is, the individual state of moral consciousness (the good or the evil).

The second of the positions related to the origin of moral values is objectivity. Here the source of value is not survival, but the aspects that are in the object itself. Due to the fact that the reality surrounding them is given in the same way, their value should be read in the same way by all. (Twardowski, 1965, s. 330)

This view was opposed by the Socrates and Plato, and also by Aristotle. The philosophers who observed the difference in the perception of good and evil were, in fact, based on mythology - the soul (the real man) passed over his sin through the river of forgetfulness, "Leto", and now he has to remember the truth, and there the philosophers are needed. (Platon, 2010)

There is plenty supporters of objectivity, for example: representatives of Catholic social science (everything God created is good), or philosophers like M. Scheler, N. Hartmann, D. von Hildebrand.

The last of the quoted positions on the way to moral values are present is relativism. This view lays the source of value beyond the subject and the object, claiming that value is the relationship between them, eg man - food (value is nutrition), man - knife (value is eg the possibility of

slicing bread), man - car (value is eg the possibility of reach to work), etc. instrumental relations of the object with respect to the subject. (Lipiec, 2015, s. 103-116)

Murphy, Laczniaak and Wood believe a set of “good habits,” commonly called virtues, are essential for the individuals and organizations in many aspects of its functioning. Virtue ethics is different from the other theories in that it focuses on the individual and the organization rather than a problem or dilemma. In addition to practicing good habits and placing emphasis on individual/corporate character, other features of virtue ethics include the importance of imitating ethical behavior of mentors/elders, that virtues are learned and practiced (so seniority matters) and that the aspirations of the community are a big motivator. (Murphy, Laczniaak & Wood, 2007)

Values in management play vital role as they not only shape organizational culture (Rzewożna-Krzemińska 2016) which influence or it is influencing social capital potential (Bylok, 2016; Bylok & Cichoblażinski 2016) but also are important factor in the process of building relationship with consumer (Karczewska & Bsoul - Kopowska, 2016). Organizational values are strongly connected with cultural context of the society that is way managers cannot neglect this issue. It is important in the case of foreign capital companies representing sometimes cultural paradigms contradictory to local norm and values systems. Understanding the cultural context help also understand employees behaviors and attitudes.

2. Data and Methods

This paper will present the fragmented results of research that are part of an international project on ethical attitudes (Poor et. al 2016). The authors of the study decided to investigate what were the preferences in declaration about ethical attitudes of respondents.

For the examination purpose 1000 employees were selected at random. From this sample 803 questionnaire forms correctly filled in were obtained. In the selection sample was used a method without returning. The research was conducted in 2013 on the group of people from the area of Southern Poland (table 1).

Table 1: Sample characteristics

Features	Number	Percentage
<i>Sex</i>		
Male	317	39,48%
Female	486	60,52%
Sum:	803	100%

Source: own study

The research was aimed at determination of ethics behavior. Questionnaire was created by D. Forsyth (1980). The respondents were asked to give their opinions about 20 statements, their opinions were expressed in range between 1-5 where 1 meant „I fully agree”, 3 – „neither agree, nor disagree” and 5 meant „I fully disagree” with a statement.

For examining the connection between variables and respondents statements it was used the chi-square test (χ^2) which lets verify the zero hypothesis about the independence of two variables X and Y, towards the alternative hypothesis, according to which the variables X and Y are dependent (Bialek & Depta 2010). In order to determine the power of the relation of features a C-Pearsona (C_p) index was applied. This paper contains correlation coefficients

statistically significant on the level $p < 0.05$. This criterion made the authors focus on correlations with significant influence and only those have been analysed herein.

3. Results and Discussion

In the research tool used, statements numbered 11 to 20 (Table 2) directly assess the attitude of respondents in terms of objectivity and relativism.

Table 2: C-Pearson coefficient for the selected statements on respondents' sex

Statement		Correlation coefficient
1	People should make certain that their actions never intentionally harm another person	0.0669
2	Risks to another should not be tolerated, irrespective of how small the risks might be	0.0255
3	The existence of potential harm to others is always wrong, irrespective of the benefits to be gained	0.0114
4	One should never psychologically or physically harm another person	0.0668
5	One should not perform an action which might threaten the dignity and welfare of another individual	0.0399
6	If an action could harm an innocent other, then it should not be done	0.0543
7	Deciding whether to perform an act by balancing the positive consequences against the negative consequences of the act is immoral	0.0047
8	The dignity and welfare of the people should be the most important concern in any society	0.0312
9	The welfare of others should not be sacrificed irrespective of the circumstances of the action	-0.0052
10	Moral behavior closely corresponds to the idea of the most "perfect" action	0.0085
11	*There are no ethical principles that are so important that they should be included in every code of ethics	0.0043
12	*What is ethical varies from one situation and society to another	-0.0263
13	*What one person considers to be moral may be judged to be immoral by another person	0.0199
14	*Different types of morality cannot be treated in terms of "right" or "wrong" because what is moral depends on the situation	0.0064
15	*Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual	-0.0017
16	*Moral standards are simply personal rules that indicate how a person should behave	0.0063
17	*Ethical considerations are so complex that individuals should be allowed to formulate their own individual codes	-0.0161
18	*A rigid ethical position that prevents certain actions could stand in the way of better human relations and adjustment	0.0194

19	*No satisfactory rule concerning lying can be formulated	0.0059
20	*Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action	0.0123

Source: own study

Note: * Statements related to attitudes on the scale of objectivity - relativism

The study attempted to correlate the opinions of respondents with variables such as gender, age, length of service, place of residence and the business sector in which they acquired professional experience. The results revealed that none of these variables showed statistically significant effects on the level of compliance of the respondents with the proposed statements. Exception is the statement # 20 that the assessment of morality or immorality is based on the circumstances in which it was committed. With respect to this statement, there is a relationship in which, with age and professional experience, the tendency of respondents to relativize the moral judgment of the lie increases.

In order to determine the attitudes studied on the scale of relativism - objectivism was made to rank average values of responses in relation to individual statements according to the principle of least to greatest value (Table 3).

Table 3: Mean value of respondents' responses to individual statements

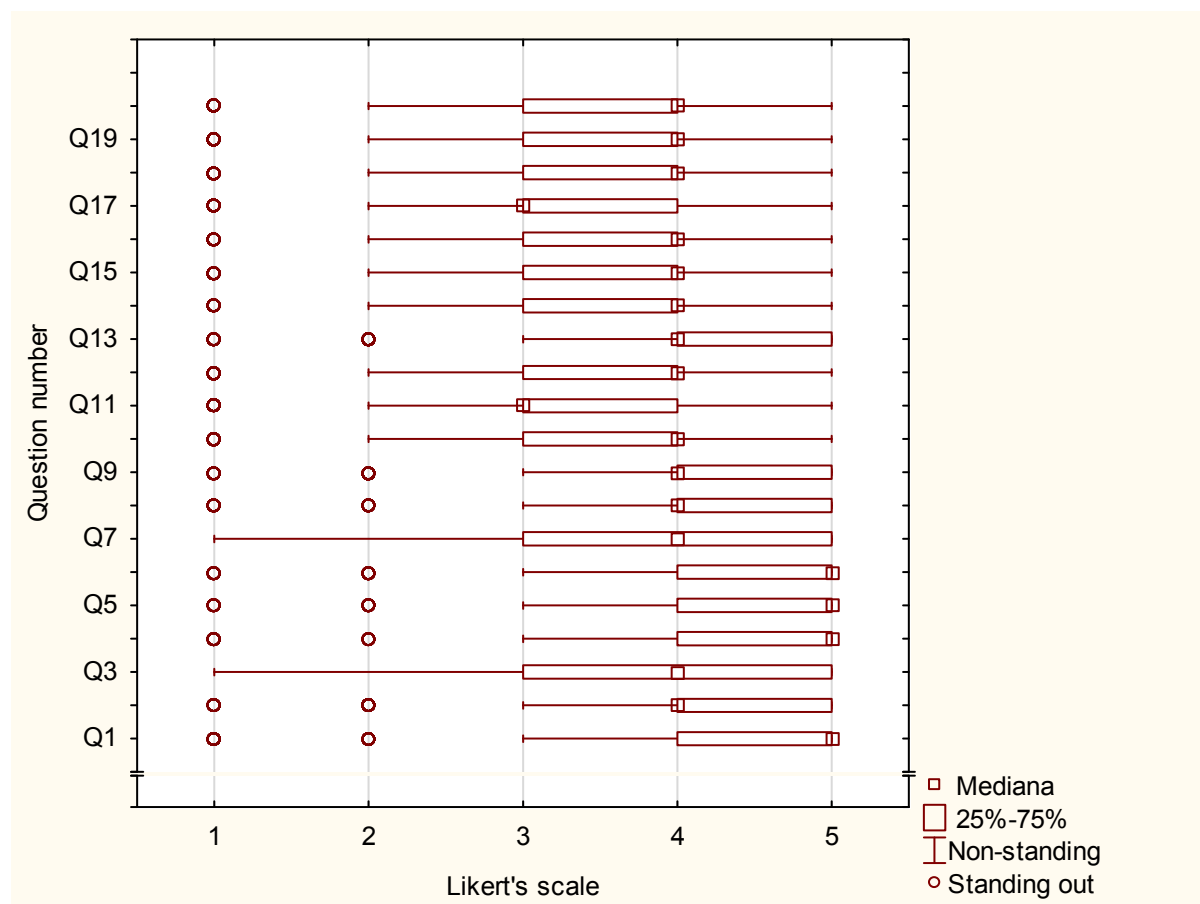
Statement number	Statement	Mean value
11	*There are no ethical principles that are so important that they should be included in every code of ethics	3.24280
17	*Ethical considerations are so complex that individuals should be allowed to formulate their own individual codes	3.39299
19	*No satisfactory rule concerning lying can be formulated	3.48811
18	*A rigid ethical position that prevents certain actions could stand in the way of better human relations and adjustment	3.49061
20	*Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action	3.57822
15	*Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual	3.62703
12	*What is ethical varies from one situation and society to another	3.63204
14	*Different types of morality cannot be treated in terms of "right" or "wrong" because what is moral depends on the situation	3.65582
7	Deciding whether to perform an act by balancing the positive consequences against the negative consequences of the act is immoral	3.71589
16	*Moral standards are simply personal rules that indicate how a person should behave	3.74343
10	Moral behavior closely corresponds to the idea of the most "perfect" action	3.77847
13	*What one person considers to be moral may be judged to be immoral by another person	3.92491
9	The welfare of others should not be sacrificed irrespective of the circumstances of the action	3.93742

3	The existence of potential harm to others is always wrong, irrespective of the benefits to be gained	3.99875
2	Risks to another should not be tolerated, irrespective of how small the risks might be	4.13642
8	The dignity and welfare of the people should be the most important concern in any society	4.24781
6	If an action could harm an innocent other, then it should not be done	4.28035
1	People should make certain that their actions never intentionally harm another person	4.32916
5	One should not perform an action which might threaten the dignity and welfare of another individual	4.38673
4	One should never psychologically or physically harm another person	4.54318

Source: own study

Note: * Statements related to attitudes on the scale of objectivity - relativism

With respect to statements on attitudes on the scale of objectivity - relativism the highest average response level (3.92491) was observed with regard to the statement that what one person considers moral can be considered immoral by another person. While half of the respondents (Figure 1) fully agreed with this statement. Second, in terms of the average response (3.74343), it was found that moral standards are simply personal rules that indicate how one should behave. In this case, $\frac{1}{4}$ of the respondents indicated a response on Likert's scale of 3 and less, and half chose a response of 5. In terms of statements 12, 14, 15, the distribution of responses was similar, ie $\frac{3}{4}$ respondents chose response 4 and less. The lowest result with respect to the average response value was obtained by number 11, indicating that there are no ethical principles that are so important that they should be included in each ethical code. With respect to this statement, half of the respondents gave a response less than 3 on the Likert scale while showing the weakest relativistic attitudes.

Figure 1: Statistical indicators: mediana, 1 quartile, non-standing, standing out.

Source: own study

4. Conclusion

As a result of the study, the trend in relativistic attitudes was revealed in the analyzed population. They are not very strong, and in some cases they can be considered moderate. It is therefore important to raise the question of the extent to which such a relationship may influence the way people are led in organizations. The results of research on relativist attitudes may indicate that there is a group of values, norms and principles in the consciousness of a population that are not subject to a relative assessment and are universally superior. From this point of view it seems reasonable for managers of organizations to have ethical codes which in a manner consistent with employee beliefs would regulate their behavior.

The lack of strong statistical relationships with variables such as gender, age, length of service or place of residence clearly indicate that the attitudes of the respondents are strongly cultural and should be combined with religiousness and traditional upbringing in Poland. Consequently, corporate managers should, in practice, pay particular attention to non-aggression of highly relativistic behavior, as it puts workers in a situation of internal conflict (Rossy, 2011) and the need to make choices contrary to their own convictions. It should also be borne in mind that such situations raise not only ethical doubts, but also significantly affect the motivation and efficiency of workers.

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Utilitarian ethical attitudes towards young employees

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Abstract

The purpose of this paper is to identify the theoretical foundations of concepts that describe the ethical attitudes of employees. In the empirical part of the paper there will be presented and discussed the results of research related to young workers in the field of ethical utilitarian preferences. Clarification of this problem is important because it leads to a deeper understanding of the influence of individual moral philosophy on employee behavior, especially when it comes to the need to solve ethical dilemma, i.e. make specific decisions about behavior and its assessment in terms of "right" and "wrong". Does maximizing usefulness and benefitting from actions consequences create the choices among young people today? The research undertaken in this paper will attempt to answer this question.

Keywords: work ethics, utilitarianism, attitudes of employees,

JEL Classification: D23, M14, O15, M59

1. Introduction – utilitarian ethics

For many centuries (and certainly since the time of Socrates - V.p.n.e.), the meaning of human life has been sought, and efforts have been made to identify behaviors that serve to have a good life. It was established that what determines the direction of human behavior is what is considered good, pleasant, or beneficial. (Arystoteles, 2000, pp. 77-300)

Both Plato and Aristotle, while creating the theoretical foundations of completely different socio-political systems, agreed in one, namely that right or wrongs is defined by the elites. These, in turn, were supposed to take care of citizens' happiness.

The essence of this approach was the belief that good and evil and the nature of moral norms are objective. Consequently, it was necessary to choose the act in question, referring to the elite's finding of what's right, that is, the choice of right option, because it is good and not because it leads to pleasure or gain. (Więckowski, 2012, p. 153)

Approximately 2000 years after Plato and Aristotle, in 17th century, Thomas Hobbes, an English philosopher, lived and created, who subjectified the dimension of good (like Frederick Nietzsche, Max Stirner, Ayn Rand, David Gauthier). It is the man himself (not the elite) who decides what is good and what is bad. This revolutionary (as at that time) thought that man could define good as something which serves him only, without taking into account the social interest.

Adam Smith, the father of the market economy, also referred to the egoistic approach. He spoke positively about it saying that it was the driving force of the economy.

Adopting a subjective and egoistic point of view (Dion, 2012), that is, the man himself decides what is good for him (the most important), raised a discussion on the following question: What can be good for man? The German philosopher Max Scheler (the late nineteenth and twentieth century) responded to this question. Not only did he point out the five kinds of values (ie, what is valuable to the human being, the good), but also ordered these types into the hierarchy, thus giving them priority in choice or implementation (utilitarian values considered the least significant). Perhaps because of its compatibility with the Christian doctrine, Scheler's thought was developed, among others, by Karol Wojtyła, Dietrich von Hildebrand and by Edmund Husserl's pupils. However, Scheler's hierarchy of values did not only have supporters. Both Scheler and Christian philosophers (convinced of the objective nature of moral values - the so-called absolutist ethics) was objected by relativistic researchers (subjectivist, relative moral values - the so-called ethical relativism). According to relativists (eg M. de Montaigne, H. Spencer, A. Comte, E. Renan, RW Emerson, F. Nietzsche): different people may be subject to different moral requirements (eg. profession, social position, age, sex, cultural differences, etc.); or moral judgments dependent on persons, groups, circumstances. (Hołówka, 1981, p. 92)

Setting subjectivist views with egoistic and relativistic ones supposes that man (including an employee) can be guided in his moral choices by the criterion of utility, personal benefit, or utilitarian values. (Woźniczka, 2009) "Utlitaryism" is a term derived from the Latin language, because *utylitas* meant benefit, usefulness. (Kowolik, 2008, p. 175)

As a philosophical doctrine, utilitarianism gained popularity at the turn of the 18th and 19th centuries, with Jeremy Bentham and John Stevard Mill. At the same time, the usefulness of J. Bentham's definition also meant satisfaction. According to the utilitarian, maximizing this satisfaction by making oneself happy and avoiding pain, unpleasantness, is the ultimate goal of human life. Reasons, sources of pleasure and distress may be different, so satisfaction is also characterized by diversity. It is therefore desirable to increase the amount of pleasure and the level of feeling and intensity. Consequently, utilitarianists do not see the difference between being a hero and eating ice cream, since the satisfaction that both activities bring can be the same. (Mill, 1959, pp. 13-21)

By addressing ethical issues we can say that *good* is pleasure, *evil* is the sadness or the lack of pleasure itself. Utilitarian ethics tells a person to maximize the pleasure for the growth of satisfaction, ie one's personal good. As far as social welfare is concerned, it is the interest of the leaders to bring as much pleasure as possible to as many people as possible, from electoral promises to their execution, which guarantees the success of the election.

With the development of utilitarian thought, two streams emerged: first, the utilitarianism of action - the evaluation of actions based on their effects (so-called consequentialism), which should make pleasure, not the opposite; The second line, we call the utilitarianism of the rules that emphasise (in the general assessment of the moral act) adhering to the rules that have been adopted on the basis of their usability, that is, their observance leads to greater utility, regardless of the immediate effect of the action. (Hartman, 2004, p. 242)

Today the so-called, utilitarian culture is in harmony with the spirit of capitalism (profit maximization), which has led to the fact that not only the value of things is measured from the point of view of their utility but also of people's usefulness (eg, employees are referred to as organizational resources). (Kaczor, 2015, p. 95)

In spite of the allegations made by J. Bentham's moral philosophy, its hedonistic calculation is the basis of contemporary liberal culture. The ethical business philosophy, in turn, is based on business ethics, which, in situations difficult to judge the moral well-being of decisions and

their effects, provides guidance for making choices and evaluating them. (Klimczak, 2017, p. 9)

2. Data and Methods

This paper will present the fragmented results of research that are part of an international project on ethical attitudes (Poor et. al 2016). The authors of the study decided to investigate whether there are differences in ethical attitudes represented by employees of all ages and whether these attitudes are utilitarian. In particular, the researchers analyzed the group of young workers, ie people up to the age of 34.

For the examination purpose 1000 employees were selected at random. From this sample 803 questionnaire forms correctly filled in were obtained. In the selection sample was used a method without returning. The research was conducted in 2013 on the group of people from the area of Southern Poland (table 1).

Table 1: Sample characteristics

Features	Number	Percentage
<i>Age</i>		
Under 24	252	31,38%
25 -34	207	25,77%
35 -44	134	16,69%
45 -54	178	22,17%
55 or above	32	3,99%
Sum:	803	100%
<i>Seniority</i>		
Under 2	173	21,54%
3 to 5	175	21,79%
6 to 15	171	21,30%
16 to 25	146	18,18%
26 or above	138	17,19%
Sum:	803	100%

Source: own study

The research was aimed at determination of ethics behavior. Questionnaire was created by D. Forsyth (1980). The respondents were asked to give their opinions about 20 statements, their opinions were expressed in range between 1-5 where 1 meant „I fully agree”, 3 – „neither agree, nor disagree” and 5 meant „I fully disagree” with a statement.

For examining the connection between variables and respondents statements it was used the chi-square test (χ^2) which lets verify the zero hypothesis about the independence of two variables X and Y, towards the alternative hypothesis, according to which the variables X and Y are dependent (Bialek & Depta 2010). In order to determine the power of the relation of features a C-Pearsona (C_p) index was applied. This paper contains correlation coefficients

statistically significant on the level $p < 0.05$. This criterion made the authors focus on correlations with significant influence and only those have been analysed herein.

3. Results and Discussion

Of the 20 statements proposed by the researchers, 4 related directly to the concept of utilitarianism, and these were correlated with the age and duration of the respondents' work. However, the results of the study also revealed the correlations of the variables mentioned with the other 4 statements. All of these together with C-Pearson correlation values are presented in Table 2. Most correlations are statistically significant.

Table 2: C-Pearson coefficient for the selected statements on respondents' age and seniority

Statement		Age		Seniority	
		Correlation coefficient	Coefficient for data by category*	Correlation coefficient	Coefficient for data by category*
2	Risks to another should not be tolerated, irrespective of how small the risks might be	0.0766	0.0692***	0.0778	0.0643***
3	The existence of potential harm to others is always wrong, irrespective of the benefits to be gained	0.0962	0.0989	0.0978	0.1017
6	If an action could harm an innocent other, then it should not be done	0.0767	0.0772	0.0791	0.0869
7	Deciding whether to perform an act by balancing the positive consequences against the negative consequences of the act is immoral**	0.1063	0.1173	0.1099	0.1229
8	The dignity and welfare of the people should be the most important concern in any society**	0.1246	0.1178	0.1355	0.1588
9	The welfare of others should not be sacrificed irrespective of the circumstances of the action**	0.0961	0.0955	0.1066	0.1209
10	Moral behavior closely corresponds to the idea of the most "perfect" action**	0.0934	0.1037	0.0957	0.1094
20	Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action	0.0710***	0.0778	0.0685***	0.0749

Source: own study

Noter: *age and work time categories according to Table 1.

**statements referring to utilitarian ethical attitudes

***Indicators with low statistical significance

The strongest correlation with age and time of work has been observed with regard to the finding that the dignity and well-being of people should be a priority in every society. Along with age and professional maturity, measured by the worked time, the level of approval for this statement increases. This relationship should be associated with an increase in the general

maturity that occurs with the passage of time. It seems that young people show less understanding, but also less knowledge about the rules of social life. On the other hand, the results of this study can also be interpreted as a signal that older respondents are more likely to perceive lack of respect for human dignity and well-being in the environments in which they live and work. It is interesting that correlation coefficients of respondents' responses to work experience show stronger relationships than age. It can be assumed that the experience gained in the course of professional work has a significant influence on the ethical attitude of the respondents. It is understandable that organizations are a micro form of reflection of the real world and its rules. However, because of the scale of the organization, one may notice a faster flow of feedback in the area of approval or lack of approval for specific bases and employee behaviors. Organizations more often and more precisely formulate a catalog of values and rules that they consider important from the perspective of achieving their goals. The results confirm that work is an important factor shaping ethical attitudes and also playing an educational role.

As regards the statement that it is immoral to make decisions based on the combination of potential positive and negative consequences of action, relatively high dependency ratios have also been observed. And just like in the previous statement, their values are higher with respect to correlation with length of service. This statement directly relates to utilitarian attitudes and indicates that with increasing age and work experience, the attitudes of respondents towards the abandoning the utilitarian preferences change. This thesis also confirms the analysis of the respondents' responses when it is stated that "moral" behavior is closest to the idea of the most relevant (most favorable) actions.

The image of the non - utilitarian attitudes of older respondents confirms the indications they make being closer to the statement, that regardless of the circumstances, one should not sacrifice the good of others. The older the respondent, the greater the compliance with the quoted statement was. Such attitudes seem to be strongly influenced by religion (in Poland more than 90% of citizens are believed to be religious, about one in ten deeply religious (Boguszewski, 2015)), in the case of the Christian religion, it seems that in relation to this statement, young people are particularly close to using utilitarian attitudes, especially with regard to short period of work. We can find prove for this in other research findings (Swadzba, 2016)

In addition to claims related to utilitarian attitudes, the results of the study also showed statistically significant correlations with respect to the other four statements. The first to say that risking at the expense of another person should not be tolerated regardless of how low the risk is, in some ways, is a contradiction to utilitarianism because it undermines the decision-making principle based on benefit calculations. With the increase in length of service and the age (but not so much of the length of service here), the tendency of the respondents to express compliance with such an attitude is growing. This relationship is confirmed by subsequent statements by older respondents, who say that the potential for harming others as a result of their own actions is always bad, regardless of the benefits of these activities or that harming an innocent person, should be avoided.

Also, as a result of grouping age and service length data into compartments, a linear relationship is revealed, but there is no statistical significance for the variable age and experience in years with regard to whether a judgment or a lie is considered moral or immoral depending on the circumstances in which it was committed. The relativism of this attitude seems to increase with age and employment, however, in hiking manner.

Analyzes indicate that certain attitudes increase with age, and most importantly, with acquired professional experience, allow for some inferences about young workers, both in terms of age and length of service. Young workers appear to have less fit for social rules that are generally

accepted, such as the primacy of dignity and human good, as the dominant values that determine behavior. They are also inclined, in some cases, to more utilitarian, egoistic attitudes.

These research results provide some guidance on how to direct representatives of this group of employees in organizations. It can be assumed that young utilitarian attitudes can be fueled by the use of more aggressive motivational tools that focus on: achieving results, competing, building your own career paths, and individualistic perception of success. That gives a key for managers to use in unscrupulous way young employees potential exploiting their strength rather than adopt positive psychology instruments (Randak-Jezińska, 2016) focused on cooperation (Skolik & Robak, 2016), empowerment (Cichoblański, 2016) or stimulation creativity (Słocińska, 2016).

On the other hand, the correlations revealed by the study indicate the role that professional experience plays in shaping the worldview of young people and understanding the social rules that exist in society. The organization appears here as a social institution that is important in the process of "raising an employee" and has a strong opinion-making influence. The question here is whether organizations should focus on their actions and formulated staffing goals on social adaptation. From the economic perspective, utilitarian attitudes seem to be more effective and more successful for individuals and businesses, which in the short term is more beneficial for both sides. However, such attitudes can give rise to image problems, even in the context of an organization's social responsibility, which promotes fair play behaviors.

4. Conclusion

The study, which has been completed, has allowed two basic conclusions to be drawn for the analyzed employee group. First, work plays an important role in shaping ethical attitudes. Second, these attitudes, together with professional experience and the time, change and lose their utilitarian character. These conclusions give rise to specific repercussions on the general management or even management of personnel. One of the effects is pragmatic and refers to the instruments an organization can use to motivate and stimulate its employees, depending on their features, such as their age or occupation. Organizations can and should also define their own goals and ethics of staff behavior so that recruited employees do not have to deal with conflict with organizational values and their own, because the only consequence of such conflicts is a decrease in productivity and employee efficiency. The second of the research conclusions can be used to shape the philosophy of organizational management and its long-term policy, as it relates to the role that an organization attributes itself to its functioning in society or the local community. This is about the educational and job attitudes creating nature.

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The influence of gender on the preference of employee benefits by generation Y representatives

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Abstract

The aim of this paper is to determine which benefits are considered to be least attractive, or inappropriate, by university students – representatives of Generation Y. The paper examines whether the gender of the respondent influences the set of desired employee benefits. Research was done among the students of two faculties of Mendel University in Brno - Faculty of AgriSciences, and Faculty of Business and Economics. The research was conducted in the period of 2002-2014. From the data obtained it can be concluded that the students, except for two employee benefits, do not categorically disregard various benefits provided. Students would not expect an availability of benefits like shopping tour in abroad or Christmas box of chocolates for children. There were identified eight least requested employee benefits, for which there was done the analysis of their correlation with the gender of respondents. Repeated statistical correlation was identified in the case of the following benefits: Children's nurseries and kindergartens, provision of employee-stocks, sports vouchers for swimming, Christmas box of chocolates for children.

Keywords: Employee benefits, Generation Y, Gender, research, student

JEL Classification: J32, D22, M12

1. Introduction

The notion of Generation Y first appeared in 1993 in the journal "Advertising Age", and it referred to the generation of children born in 1985-1995 (Constantine, 2010). However, some authors shift the year of birth beyond 2000, even to 2004 (e.g. Clark, 2007; Beekman, 2011, and others). Strauss and Howe (2010) define the interval of birth using years 1982-2004. Alexander and Sysko (2012) even refer to the interval of 1982-2009.

This generation is often referred to by different names. These include the Internet and the digital generation, the click generation, echo boomers (Balda, 2011; Kopecký, 2013). Mainly in the USA (e.g. Evans, 2011; Jayson, 2012), the Millennials (Children of the millennium) is often used. Most of Generation Y is entering the labour market right now and if the employers want to attract the best talented people, they have to adapt to their requirements not only in their recruitment policies, but also in their approach to these young workers.

People born in this generation like to try new challenges, overcome obstacles, and are not afraid to express their opinion. They are practical, optimistic and confident in the future and a better tomorrow (Evans, 2011). It is the first "global" generation communicating, discussing, and sharing information right over the internet. Generation Y has sustained access to computers and mobile phones since their youth, and they require their employers to allow the daily use of these technologies in the context of professional life, too (Stojanová, Tomšík & Tesařová, 2015; Kubátová & Kukelková, 2013; Evans, 2011; Eisner, 2005). The authors Stojanová, Tomšík and Tesařová (2015), Hershatter and Epstein (2010) and Tulgan (2009) point out that the requirements of Generation Y at the labour market are very specific, and the future employers must take into account their potential for satisfaction of these requirements. According to them, this generation values most the long-term education followed by gaining experience in the areas

covered by their company. Generation Y emphasizes the long-term effect, not only at work but also in their personal life, education, investments, prefers the efficiency of time and resources.

Employee benefits are such forms of rewards that an organization provides to employees just because they are its employees. Benefits are usually not attached to the performance of the employee. In providing the benefits there is often taken in consideration the status of employees in the company, the period of employment in the organization and their merits. Similarly the benefits are defined by DeCenzo (1999), Duda (2011), Kleibl, Dvořáková and Šubrt (2001), Vnoučková (2014) and Hammermann and Mohnen (2014) who consider the benefits as an element of reward provided for remuneration, in addition to various forms of monetary rewards.

Attracting new employees is not only based on the provided employee benefits – there are other important characteristics of a company, e.g. a good working atmosphere, and career advancement opportunities (Backes-Gellner & Tuor 2010). Benefits, though, become an important criterion of acceptability of a job offer. According to Provazník and Komárková (1996), Grubb (2008), Dulebohn, Molloy, Pichler and Murray (2009), Muse (2012) in the case of specific tangible rewards for employee benefits, they consider that except objective value of a benefit its subjective value is often more important, depending on how it is perceived by the recipient. The subjective value contains symbolic meanings. Specifically, distinctive material rewards, if they are accurately targeted to the current situation of the recipient, are more stimulating than money. Employees perceive interest in them, they realize that they are valuable for the company, their self-esteem and sense of responsibility are increasing, and a sense of belonging reinforces in them, which eventually increases their self-identification with business objectives.

2. Data and Methods

The paper examines whether the gender of the respondent, members of the Generation Y, influences the set of desired employee benefits. The aim of this paper is to determine which benefits are considered to be least attractive, or inappropriate, by university students – representatives of Generation Y.

The workshops objects “Human Resources Management” and “Business Management” students of master degree Faculty of Business and Economics and the Faculty of AgriSciences, Mendel University in Brno during the academic years 2002-2014 participated in research focused on the area of employee benefits. In the first part of the research was presented to the students designed a questionnaire with 40 employee benefits that can be expected by the employer. The students of both faculties should mark the individual employee benefits, level of interest in providing benefits. Students evaluate their preference of the particular benefits on a Likert-type scale of 1 (definitely yes) to 4 (definitely not), and for the purposes of this paper there are processed the results of the negative answers.

Over the years participated in the survey a total of 1,442 students of Faculty of AgriSciences and 2,274 students of the Faculty of Business and Economics. Numbers of students in respective years of research were ranged from 175 to 321 students. This corresponds with approx. 70-90 % of all students studying the final year of their study programme.

Selected contingency tables were compiled, both with empirical frequencies (n_{ij}) and expected frequencies (n'_{ij}) in order to conduct statistical analysis of the dependence. The chi-square (χ^2) test criterion was used to analyse this and in case of verification of the dependence, the intensity of dependence was calculated using the Pearson's contingency coefficient (P) (Blašková & Stehlíková, 2009).

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^s \frac{(n_{ij} - n'_{ij})^2}{n'_{ij}} \quad (1)$$

$$P = \sqrt{\frac{\chi^2}{\chi^2 + n}} \quad (2)$$

For the results that showed statistical dependence there was determined association dependence. Association dependence explores the relationship between two qualitative alternative variables. The association coefficient V measures the intensity of the association in values ranging from -1 to +1. In the case of this research, a positive number means a benefit preferred by men and not preferred by women; negative number means a benefit not preferred by men and preferred by women.

$$V = \frac{n \cdot n_{11} - n_{1*} \cdot n_{*1}}{\sqrt{n_{1*} \cdot n_{*1} \cdot n_{0*} \cdot n_{*0}}} \quad (3)$$

Where n represents the total response rate; n_{11} the frequency of positive responses among men; n_{1*} the overall response rate of men; n_{*1} overall rate of positive responses; n_{0*} overall response rate of women; n_{*0} the frequency of negative responses of women.

3. Results and Discussion

Based on the data for the whole observed period, we can conclude that the order of two least preferred benefits by students remains unchanged, over the years. These benefits are not preferred by both student groups (students of FA and FBE). These represent the possibility of shopping tours abroad and Christmas box of chocolates for children. These benefits also occupied the last two places based on the average values of responses throughout the course of the research. These benefits can also be considered as those students certainly do not want at a higher rate (students answered they do not desire the shopping tours in more than 55 % of FBE students, and 45 % of FA students). Christmas box of chocolates for children was not desired by around 30 % of students in case of both faculties.

Other benefits not considered important by the students of both faculties, which appeared in the bottom ten benefits, there belong Scholarships for children, Rehabilitation exercise during working hours, Provision of employee stocks, Contribution to clothing, Sports vouchers for swimming, Children's nurseries and kindergartens. It is important to note that the answers related to these benefits were not categorically negative (definitely not), but rather negative – values of the answer “definitely NOT” ranged from 13 to 22 % of the respondents.

Among the ten least favourite benefits there also belonged Children camps, and Guarantee for mortgage, which were reported by FBE students. Students of FA, except for the same benefits as FBE students, also not considered important the benefits of the financial nature – Financial (material) gifts on the occasion of life jubilees, and Financial contribution to cultural events.

The survey found eight of employee benefits that students of both faculties consistently ranked among the ten least favourite employee benefits. These are the benefits Shopping tours abroad, Christmas box of chocolates for children, Scholarships for children, Rehabilitation exercise during working hours, Provision of employee stocks, Contribution to clothing, sports vouchers for swimming, Children's nurseries and kindergartens.

Based on the acquired data, contingency tables were formed in order to investigate square contingency and based on contingency coefficient there was determined the level of dependence. The intensity of dependence was evaluated based on calculation of Pearson's

coefficient of contingency P . Based on the calculated values of employee benefits with a proved dependence there was analysed the association dependence on gender of students preferring a particular benefit.

Table 1 shows the value based on chi-square (χ^2) test and association coefficient V for the least preferred benefits by students of FBE and FA, including the gender effect in case it was detected in more than four years of observation.

Table 1: results of depending on the respondents' gender on selected benefits (chi-square (χ^2) test and association coefficient V)

Year/benefit	Children's nurseries and kindergartens	Provision of employee-stocks	Sports vouchers for swimming,	Christmas box of chocolates for children
2002/2003	24.879*** $V = -0.33$	3.094	7.777	15.141** $V = -0.22$
2003/2004	13.454** $V = -0.183$	2.799	11.371** $V = -0.173$	5.364
2004/2005	6.086	9.178* $V = 0.168$	3.329	2.122
2005/2006	4.954	5.580	2.567	3.787
2006/2007	2.934	5.413	5.647	1.962
2007/2008	19.254*** $V = -0.216$	8.022* $V = 0.142$	13.034** $V = -0.137$	16.752*** $V = -0.126$
2008/2009	16.447*** $V = -0.229$	5.528	8.424	2.899
2009/2010	32.832*** $V = -0.322$	8.461* $V = -0.035$	4.596	4.769
2010/2011	15.472** $V = -0.22$	4.463	19.827*** $V = -0.203$	13.868** $V = -0.236$
2011/2012	24.451*** $V = -0.23$	7.585	7.066	1.385
2012/2013	7.130	9.152* $V = 0.044$	15.372** $V = -0.141$	15.622** $V = -0.164$
2013/2014	37.5147*** $V = -0.337$	3.151	1.934	1.167

Source: own processing

Note: *, **, *** Significant at α 0.05, 0.01, and 0.001

Most frequently detected gender dependence of benefit preference was identified for Children's nurseries and kindergartens, which was found in eight observed years. This benefit was preferred by women over men, and association coefficient reached the values of $V = -0.183$ to -0.337 (in fact the highest detected). As already mentioned, at the beginning of research, this benefit was described as unnecessary, and students did not require it to be included in the offer of the benefits that an employer should provide. Over the years, this benefit has been required by more students, and it did not appear among the ten least required benefits. Lack of kindergartens and nurseries in the offer of municipalities represents a big problem, when mothers try to return to work. This benefit plays an important role in the reconciliation of work and personal lives of employees.

Women also more preferred the benefits Contribution for swimming, Providing Christmas box of chocolates for children – the intensity of dependence of the answers on the gender was moderately to highly probative.

For the employee benefit Provision of employee stocks there was detected a very slight gender dependence in case of four observed years. In three years, this benefit was preferred by men, in one observed year, this benefit was more preferred by women.

Table 2 shows value based on chi-square (χ^2) test for the remaining four employee benefits with the lowest preference by FBE and FA students. Dependence of preference on respondents' gender was either not identified at all or was only identified in less than 4 observed years.

Table 2: results of depending on the respondents' gender on selected benefits (chi-square (χ^2) test)

Year/benefit	Shopping tours abroad	Rehabilitation exercise during working hours	Scholarships for children	Contribution to clothing
2002/2003	3.257	1.935	8.258*	0.823
2003/2004	4.864	5.416	2.397	12.525**
2004/2005	7.058	3.563	0.813	4.459
2005/2006	3.991	1.767	2.514	2.960
2006/2007	2.216	0.945	2.730	4.019
2007/2008	6.211*	1.033	7.146	3.600
2008/2009	1.951	1.127	0.609	3.316
2009/2010	1.941	4.733	2.795	5.942
2010/2011	5.980	0.599	7.484	2.875
2011/2012	1.717	3.730	1.245	2.199
2012/2013	6.481	1.175	3.257	7.965*
2013/2014	3.470	0.289	1.166	2.394

Source: own processing

Note: *, **, *** Significant at α 0.05, 0.01, and 0.001, respectively.

4. Conclusion

Generation Y is entering labour market, and employers have to address the issue of how to motivate these young people. One form of motivation is the provision of employee benefits. The aim of this paper was to determine, which benefits are considered to be least attractive, or inappropriate, by university students – representatives of Generation Y. The paper examined whether the gender of the respondents influences the set of desired employee benefits. From the data obtained it can be concluded that the students do not categorically disregard various benefits provided. There were identified eight least requested employee benefits, for which there was done the analysis of their correlation with the gender of respondents. Repeated statistical correlation was identified in the case of four benefits. More women than men preferred these employee benefits: Children's nurseries and kindergartens, sports vouchers for swimming, Christmas box of chocolates for children. More men than women preferred provision of employee-stocks.

Achieved results provide a guidance for employers in terms of what benefits could they focus on in order to best address the desires of potential employees belonging to generation Y.

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The employment effect of the added value of the farm in Slovak Republic

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Abstract

Slovak Republic's organic farming currently operates approximately 210 subjects. Until 1990 he was employed in the agricultural field 17% of the population today is the number of employed in the agricultural field in relation to employment in the rest of the economy less than 4%. Most of the farms, however, benefit from a profit only through the grant, subsidy or other intervention by the State or the European Union. The object of investigation work was to analyse the impact of employment on the added value of farms in Slovak Republic. The research was conducted during the years 2012 to 2015 the Slovak company selected according to specific criteria. Article method was used additive and multiplicative decomposition of added value. During the measurement period it has been carried out facilities employees' total capital and personnel costs and subsequently comparing the ratio of the two facilities monitored indicators. Based on benchmarking it was estimated that with an increase in the number of employees, companies would contribute not only to reduce unemployment but also increase its productivity and food self-sufficiency in Slovak Republic.

Keywords: Agriculture, Value added, Employees, Personal costs, Total capital

JEL Classification: Q14

1. Introduction

Activities associated with the foodstuff production on land represent a primary function of agriculture needed for the maintenance of mankind. Agriculture is a sector of material production that, together with the cultivation of crop plants and livestock breeding, provides food for population and raw materials for industry (Vanková&Baláž, 2005). The basic condition of realization of agricultural production is its primary dependence on land (Fazekašová, 2003).

While in the past the land was considered an essential mean of production in agriculture, nowadays it is understood rather as a crucial component of the environment that conditions the development of agriculture and by means of other functions it influences the formation of environment quality, including human health (Hronec, 2010). The environment is a complex network, a system of external factors, which enables the existence of plant and animal organisms and at the same time it is being changed and molded by their activity (Vincúr, 2007).

Apart from individuals, business firms operating in the field of agriculture also farm on land. However, their activities can also cause damage to the environment, including the soil. Together with the increase of crop and livestock production by using of chemicalization, many different negative influences can (and do) occur. They influence not only the quality of plant and livestock products, but also natural environment and surroundings (Gabri, 2010).

Over the past decades, Slovak farms have also begun to focus and develop in the field of ecological farming. Ecological farming emphasizes the need for ecological approaches to crop rotation, nutrition and fertilization of crops, soil cultivation, regulation of weed infestation, and protection of crops against diseases and vermin (Vanková&Baláž, 2005). By entering new market environment after 1990, agricultural business firms embarked on journey of complex

structural, economic and social changes, which, however, have manifested themselves by measurable improvements only in some aspects of technical performance and competitiveness(Kotulič, 2010).

In December 2002 at the Copenhagen Summit, The European Union approved historically the biggest enlargement to ten more countries, including Slovak Republic(Sedlák, 2003).As a part of Common Agricultural Policy Slovak Republic has bound itself, inter alia, to protect the environment. This means that the business firms focus not only on economical growth, but also on the environmental and social aspects of their activities (Majerník, 2009). Very often, prosperity of agricultural businesses preferring ecological farming on land depends not only on the use of external sources, but also on the use of national or European support.

2. Data and methods

The aim of the paper was to point out the impact of subsidies and other subventions on added value of agricultural businesses. The research was carried out at designated business firms in the period of 2012 to 2015. It was conducted according to set criteria and the first aspect of the selection of examined businesses was to choose the firms running a business in ecological agriculture, in particular in the field of basic industry. The second aspect of the selection was to focus on top businesses registered in the Business Register as joint-stock companies. The third aspect of the selection of the businesses was the availability of complete information. While meeting the objective, it was necessary to obtain the relevant data from the Register of Financial Statements of business entities accounting in double-entry bookkeeping system. In terms of the research methodology, we used the method of additive decomposition of value added and the method of multiplicative decomposition of value added. From static and also dynamic point of view, both methods have a very good predictive ability of each item of value added.

Additive decomposition of value added is expressed as follows (Chajdiak, 2004):

$$VA = Z + PC + D + IC + OVA \quad (1)$$

VA value added

D deprecations

Z trading income before taxis

IC interest costs

PC personnelcosts

OVA other value added

The structure of multiplicative decomposition is expressed as follows (Chajdiak, 2004):

$$VA = \frac{VA}{V} * \frac{V}{TC} * \frac{TC}{PC} * \frac{PC}{E} * E \quad (2)$$

VA value added

VA/V value added to earnings ratio

V/TC total capital productivity measured by earnings

TC/E used total capital of employees

E number of employees

TC/PC used total capital of personnel costs

*PC/E*used personnel costs of employees

At the end of research we compared the impact of subsidies on the analysis of added value with the use and without the use of state subsidies.

3. Results and discussion

Ten years have passed since the establishment of the first ecological farms included into the EP system. Nowadays (to 31 December 2005) The Central Control and Testing Institute in Agriculture registers 210 subjects in the system of ecological agricultural production that comply with the Act No. 189/2009 Coll. on organic production and other regulations of The European Commission or The European Council.

Among legal persons farming the land, the dominant position belongs to the agricultural cooperatives and commercial companies (Kotulič, 2010).

Majority of agricultural companies in Slovak Republic manage with profit. There are companies that are influenced by influx of subsidies, subventions and other national interventions. With the entry of Slovak Republic into The European Union, a possibility of drawings the resources not only from the state sources, but also from European funds has opened.

3.1 Agricultural employment in Slovak Republic

In the past, agriculture was the main source of existence in Slovak Republic. Therefore, the employment in the agricultural sector had had a history of high representation in Slovak Republic. Until 1990, more than 350,000 workers were employed in agriculture, representing a total amount of 17% of all employed workers in Slovak Republic. As a consequence of changes in national economy and opening of Slovak market to the countries of the European Union and third countries, agricultural production in Slovak Republic had been reduced. Together with this reduction, the employment in agricultural sector had decreased; moreover, Slovak Republic had lost its own food self-sufficiency.

On the present, the amount of employees represents a little more than 3% of the total number of employees in Slovak Republic. Similarly, the number of agricultural firms farming on land represents less than 4% of the total number of businesses in Slovak Republic. Over the last decades, the employment in the agricultural sector decreased significantly not only as a consequence of very small amount of agricultural businesses, but also as a consequence of insufficient financial valuation and motivation to occupy oneself in agriculture. Competition outside Slovak Republic had also had an impact on low employment, in particular with the import of cheap and low-quality food.

Table1: Comparison of the total number of employees in Slovak Republic and the number of employees in agriculture in years 2012 -2015

Indicator		2012	2013	2013-2012	2014	2014-2013	2015	2015-2014
Number of employees in	Economy	2329	2329,3	0,3	2363	33,7	2424	61
	Agriculture	75,4	77,1	1,7	82,7	5,6	77,1	-5,6
	Agriculture/Economy ratio	3,24	3,31		3,50		3,18	

Source: Own calculation according to <http://stadat.statistic.sk>

3.2 Analysis of added value

The assessment of financial situation requires a sufficient amount of reliable information in an appropriate structure and form (Fetisovová, 2005). The most trusted source for all kinds of

business analyses is the financial statement of accounting entities. The assumption of a long-term stability and effectiveness of business activities is to ensure the adequate dynamics of volume indicators(Zalai, 2010). The crucial indicator of economic values, business development and especially the production of the business is the value added. Value added represents an effect of manufacturing and commercial activities, which remains after the “settlement” of the inputs purchased from external environment (Zalai, 2010). Apart from production margin, value added also includes the difference between production revenues (Pr)and consumption (C)(Kotulič, 2010).

$$Valueadded = (Rs - Pc) + (Pr - C) \quad (3)$$

Rs revenue from sales

Pc product costs

3.2.1 The structure of value added

Value added is the most important indicator of production for businesses. It represents own gain of the business in the economic process (Chajdiak, 2004). For the purposes of the paper, we used the indicators of a company named SELEKT VÝSKUMNÝ A ŠLACHTITEĽSKÝ ÚSTAV, a.s.in Bučany, thereafter “the company”.

3.3 Additive and multiplicative decomposition of value added

The simplest analyses of value added are the additive and multiplicative decompositions. The data necessary for the decomposition is shown in the following table. For the purposes of the paper, we used the values of personnel costs indicator, used total capital of employees, and used personnel costs of employees.

Table 2: Indicator values of the company in years 2012 – 2015

Indica tor		2012	2013	2013- 2012	201 3 /20 12	2014	2014- 2013	201 4 /20 13	2015	2015- 2014	201 5 /201 4
Aditive decomposition	Gain	- 50732 1	7689	515010	- 0.0 2	37831	30142	4.9 2	- 56099 3	- 598824	- 14.8 3
	PC	71685 4	23065 8	- 486196	0.3 2	67534 5	444687	2.9 3	84808 8	172743	1.26
	D	74054 6	47888 3	- 261663	0.6 5	51964 6	40763	1.0 9	47217 1	-47475	0.91
	OV A	- 41973 9	- 52733 5	- 107596	1.2 6	- 55747 7	-30142	1.0 6	- 43178 6	125691	0.77
VA		53034 0	23065 8	- 299682	0.4 3	67534 5	444687	2.9 3	32748 0	- 347865	0.48
Revenues		23162 39	35064 89	119025 0	1.5 1	36312 51	124762	1.0 4	29658 27	- 665424	0.82
TC		49999 47	54149 39	414992	1.0 8	49954 13	- 419526	0.9 2	44782 46	- 517167	0.90
E		44	43	-1	0.9 8	43	0	1.0 0	46	3	1.07
Multi	VA/ V	0.23	0.07	-0.16	0.2 9	0.19	0.12	2.8 3	0.11	-0,08	0.59

V/T	0.46	0.65	0.18	1.4	0.73	0.08	1.1	0.66	-0,06	0.91
C				0			2			
TC/E	11363	12592	12293.6	1.1	11617	-	0.9	97353.	-	0.84
	5.2	8.8	5	1	2.4	9756.42	2	17	18819.2	
TC/PC	6.97	23.48	16.50	3.3	7.40	-16.08	0.3	5.28	-2.12	0.71
				7			2			
PC/E	16292.	5364.1	-10928	0.3	15705.	10341.5	2.9	18436.	2731.,0	1.17
	14	4		3	7	6	3	7	0	

Source: Own calculation according to <http://www.registeruz.sk/cruz-ublic/domain/accountingentity/show/400112>

3.3.1 Additive decomposition of value added

Value added figures had had a sliding course. In the first monitored year, the volume of value added indicator showed the value of 530,340 Euros. In the second year, with a decrease of 299,682 Euros it showed the value of 230,658 Euros. In the third year, we recorded an increase of 444,687 Euros to the volume of 675,345 Euros. In the last year of 2015, the value added volume was calculated to the sum of 327,480 Euros, which represented a decrease of 347,865 Euros.

In 2012, the indicator of personnel costs had the second largest impact on the volume of value added with the sum 716,854 Euros. Similarly, in 2013, the personnel costs had the second largest impact on the indicator of volume added with a decrease of 486,196 Euros to the sum 230,658 Euros. In 2014, the indicator of personnel costs had the largest impact on volume added with the sum 675,345 Euros. In the last monitored year, the value added was influenced the most by the indicator of personnel costs in the sum 848,088 Euros with an increase of 172,743 Euros.

3.3.2 Multiplicative decomposition of value added

The indicator of used personnel costs of employees was quantified by the sum 16,292.14 Euros in 2012. In 2013, its value was quantified by the sum 5,364.14 Euros with a decrease of 10,928 Euros. In 2014, the volume of the indicator was quantified by the sum 15,705.70 Euros with an increase of 10,341.56 Euros. In 2015, the value of the indicator increased by 2,731 Euros to the sum 18,436.70 Euros.

Another indicator studied, the used total capital of employees, was quantified by the sum 113,635.20 Euros in 2012. In 2013, the indicator showed the amount of 125,928.80 Euros with an increase of 12,293.65 Euros. In 2014, the indicator was calculated to the sum 116,172.40 Euros with a decrease of 9,756.42 Euros. In 2015, the indicator showed a tendency to decrease by 18,819.20 Euros, which was similar to year 2014. The volume of the indicator was calculated to the sum 97,353.17 Euros. On the basis of the multiplicative decomposition, we were able to state that the indicator of used personnel costs of employees had had a tendency to increase, with the second year excluded. On the contrary, the indicator of the used total capital of employees had shown a tendency to decrease, with the second year excluded.

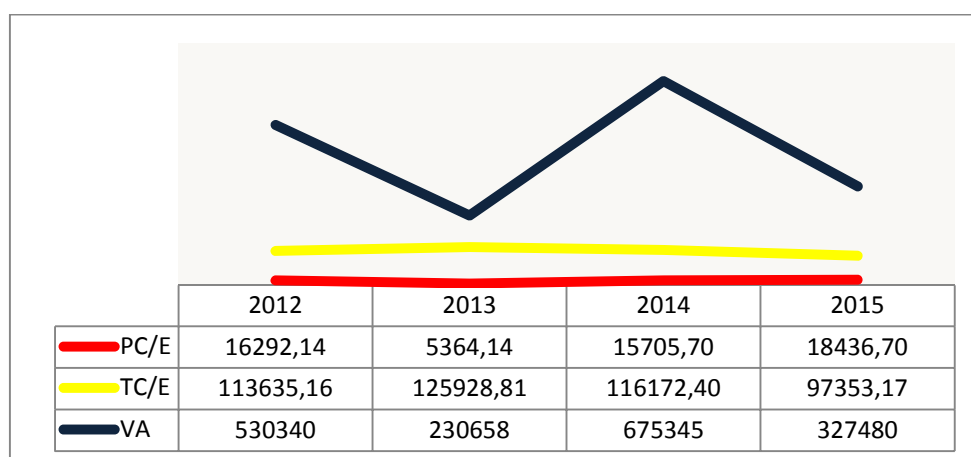
Table3: The ratio of chosen indicators in the years 2012- 2015

Indicator/Year	2012	2013	2013-2012	2014	2014-2013	2015	2015-2014
TC/E	113635.2	125928.8		116172.4		97353.17	
PC/E	16292.14	5364.14		15705.7		18436.7	
(TC/E) (PC/E)	14.34	4.26	-10.08	13.52	9.26	18.94	5.42

Source: Own calculation

On the basis of the studied sample, we were able to evaluate, that in 2012 the ratio of the used personnel costs of employees to the used total capital of employees represented 14.34%. In 2013, the ratio of the used personnel costs of employees to the used total capital of employees decreased by 10.08% to the amount of 4.26%. With an increase of 9.26%, the ratio of the indicators increased to 13.52%. In the last studied year, the ratio of the indicators decreased by 5.42% to the amount of 18.94%.

Figure1: Graphic display of chosen indicators in the years 2012 – 2015



Source: Own calculation

The graphic display shows that the used total capital of employees had higher values comparing to the indicator of used personnel costs of employees. Higher values of used total capital of employees represent the fact, that better conditions for work were created in the company, and these were associated with higher volume of value added. Similarly, higher values of indicator of used personnel costs of employees caused higher volume of value added and also initiate the employees to higher working activities.

With such used total capital of employees and used personnel costs of employees ratio, the company would be able to increase the number of employees and thus contribute not only to the reduction of unemployment, but mainly to an increase of its productivity. The indicator of monthly costs of the company per one employee was, except for the year 2013, at the level of average wage in economy. The overview of used monthly costs of employees was taken into account in the following table.

Table 4: Annual and monthly overview of used personnel costs of employees in the years 2012 - 2015

Indicator	2012	2013	2013-2012	2014	2014-2013	2015	2015-2014
Annual PC/E	16292.14	5364.14	-10928	15705.7	10341.56	18436.7	2731
Monthly PC/E	1357.68	447.01	-910.67	1308.81	861.80	1536.39	227.58

Source: Own calculation

There are several ways to increase the number of employees and to motivate them. In Slovak Republic, many business firms use subsidies to cover their financial losses in the case of crop failure, bad weather or other external factors that all have a negative impact on their financial health. Business firms also use subsidies to create jobs. The disadvantage of such subsidies is their time limitation, thus the employment only for a fixed period, which artificially reduces unemployment, and the solution of the unemployment problem is only delayed. Slovak

agricultural business firms should therefore create more jobs, which would lead to an increase in the number of agricultural business firms and the number of workers in agriculture. Slovak Republic would thus become a food self-sufficient country once again.

4. Conclusion

In Slovak Republic, agriculture has always been the main source of mankind's existence. After 1990, Slovak Republic embarked on a journey of transformation of national economy. Whereas before 1990, about 17% of Slovak population were employed in agriculture, after 1990 the volume gradually declined. Today, the number of people working in agriculture makes up only 3% of the Slovak population. Together with the decrease of number of agricultural business firms and the number of employees in agriculture, also agricultural productivity and food self-sufficiency of Slovak Republic has decreased. Based on the research of the chosen sample, we are able to conclude that the businesses are well equipped with capital; and personnel costs per one employee are on the level of the average wage in national economy. The use of subsidies to cover the financial losses has a negative impact on financial health, limitation of population employment, and so called artificial impact on value added of the businesses. Nothing prevents Slovak agricultural businesses from creating more new jobs, and thus increasing employment, GDP growth and above all food self-sufficiency in Slovak Republic.

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- ## MANAGERIAL TRENDS IN THE DEVELOPMENT OF ENTERPRISES IN GLOBALIZATION ERA

Challenges and Opportunities for the Involvement of Slovak Women into Management Positions

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Abstract

The submitted scientific paper deals with subject of women's challenges and opportunities in managerial position in frame of the V4 countries with primary focus to the Slovak women. The main objective of this paper is to evaluate the issue of women situation as entrepreneurs and to define barriers which create the basic obstacles for higher involvement of women to the managerial positions. The data are obtained from own research carried out through the questionnaire survey, furthermore, from the EU databases, as well as from the international organisations ILO and OECD. Women are less keen than men on starting their own business and female entrepreneurs continue to be in minority. The enterprises owned by women are significantly smaller and they are less represented in capital-intensive sectors. These and other factors tend to have negative impact on their sales, profits and labour productivity. The biggest barriers for women in leadership are general social norms, cultural practices in country and patriarchal corporate culture.

Keywords: entrepreneur, managers, obstacles, opportunities, women

JEL Classification: J160

1. Introduction

Across countries, there are more male than female entrepreneurs and the share of women who choose to run a business has not increased substantially in most states. The numbers of newly created female-owned enterprises failed during the crisis, though not as much as for men.

Men more than women, prefer to be self-employed. The 2009 Eurobarometer survey showed that 51 % of European men, but only 39 % of women, would rather be self-employed than employees if they had the choice (European Commission, 2009). Across 27 European countries in 2010, an average of 6,6 % of unemployed men were actively seeking to become self-employed, while only 4 % of women would do the same. Eurobarometer also shows that women may have lower preferences for self-employment because they still perceive it as too risky: 7 % of European women declared they preferred working as employees because they had been afraid of the legal social consequences if they fail as entrepreneurs.

Comparable international data on the number of businesses owned and controlled by women across countries, as well as their size, industrial specialization and basic measures of performance are still lacking. This is due mainly to difficulties in retrieving information about owners from standard business demography statistics, and because of the absence of international definitions of male and female-owned enterprises. The OECD Eurostat Entrepreneurship Indicators Programme is addressing this gap by developing definitions and methodologies for data harmonization and development (OECD, 2012).

There is a clear need for policy to raise awareness of entrepreneurship as a career option for women. Programmes are also needed to boost self-esteem and growth expectations among

potential and established women entrepreneurs. Men have greater faith in their entrepreneurial skills (Brush et al., 2011) and are also more optimistic about the profitability of their enterprise (Eurostat, 2008). Female entrepreneur networks, which are major sources of knowledge about opportunities for successful entrepreneurship, can bolster the self-confidence of women entrepreneurs.

On average, women business owners have higher level of educational attainment than men, but less experience managing a business. Women often have different reasons from men for starting a business. More women than men become business owners out of necessity. Women tend also to accord more importance to the working time flexibility afforded by self-employment. Other reason for women to start their own business is that they earn less than men. Another opportunity for women to be successful is to find their place in the public sector, for example in politics.

2. Data and Methods

The main objective of this paper is to analyze and to evaluate the issues of women's entrepreneurial activities, challenges and opportunities of women in managerial positions in Slovak Republic in comparison with V4 countries and some other countries from European Union.

The data was gathered from own authors' research and other secondary data taken from FAO, European Commission, Eurostat and OECD. These databases are focused mainly on the trends in women entrepreneurship, motivations and skills of women entrepreneurs, further, data deals with gender pay gap, barriers to women's rise to leadership, motivations and skills of women entrepreneurs. In to research are included European Union countries having regard to V4 countries- Slovak Republic, Czech Republic, Poland and Hungary.

3. Results and Discussion

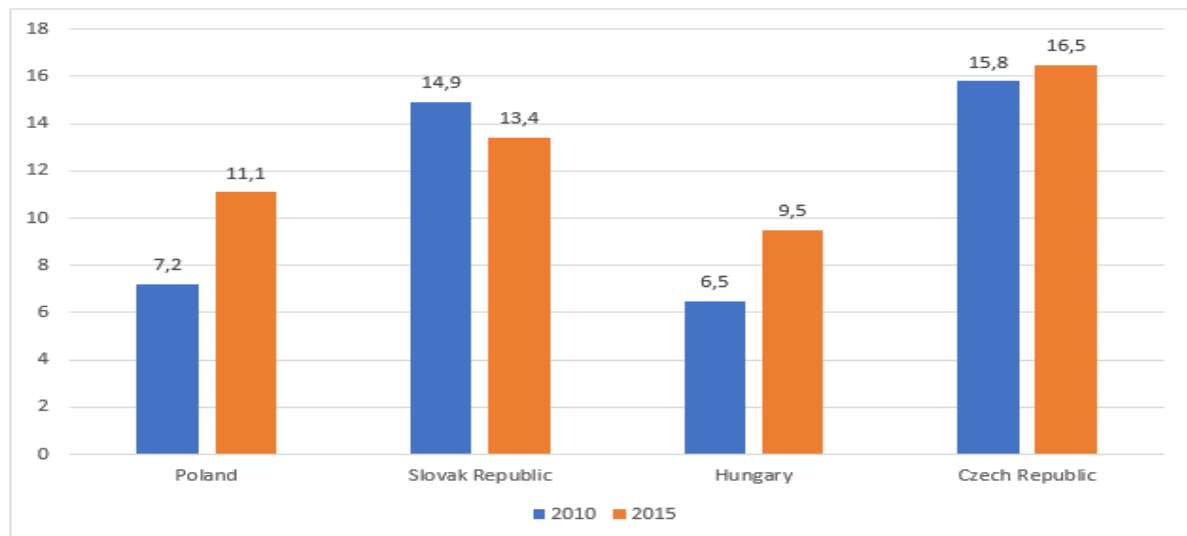
3.1 Gender Pay Gap

Women are paid less than men, discrepancies being largest among top earners. In many countries the pay gap has narrowed in the past decade. In recent years, however, it has closed at a slower pace and wide gaps persist in a number of countries.

Compared to men, women are less likely to work full-time, more likely to be employed in lower-paid occupations, and less likely to progress in their careers. As a result gender pay gaps persist and women are more likely to end their lives in poverty. This data looks at how many men and women are in paid work, who works full-time, and how having children and growing older affect women's work patterns and earnings differently to men's. It looks at how women bear the brunt of domestic and family responsibilities, even when working full-time. It also considers the benefits for businesses of keeping skilled women in the workplace, and encouraging them to sit on company boards.

Gender wage gap means that men's median wages are higher than women's. Figure 1 shows those differences in V4 countries. Among full-time employees, women earned in Slovak Republic less about 13,4 % than men in 2015. In 2010 it was 14,9 %, so we can say that situation in Slovak Republic its going better. In other V4 countries is the opposite situation, gender wage gap increased from 2010 to 2015.

Much of the wages penalty is explained by women working shorter hours in lower-paid occupations than men. However, in many countries, unobserved factors account for a sizable component of the gender pay gap. One kind of penalty is "motherhood penalty", for women during their childbearing.

Figure 1: Gender Wage Gap

Source: OECD database available on: <http://stats.oecd.org/index.aspx?queryid=54751>

The wage gap is narrow for young women, but there is a wage penalty for motherhood.

Although younger women's earnings are drawing closer to those of their male counterparts in many OECD countries, women still face important wage penalties as their age and have children. In Slovak Republic, differences in pay gap between women from age group 25-29 and 40-44 and 55-59 is lower than for example in Czech Republic. The gender gap in age group 25-29 in Slovak Republic was 14 % in 2010, 15 % in age group 55-59 and almost 40 % in age group 40-44 years.

There is increasing recognition of the business case for having more women in business and at more senior levels. However, there is a "leaky pipeline" in business with many women leaving or not advancing.

Firms can do much themselves, in order to empower women. The range of good practices is starting to emerge. In practice, much will depend on the commitment of senior and middle-management to driving the necessary change.

3.2 Barriers to Women's Rise to Leadership

With growing competitive pressures, firms are constantly looking for the best talent. Women account for a growing share of the talent emerging from education system and more and more graduate with science degrees (OECD, 2011). Firms risk the losses, if they do not leverage this talent pool.

Tapping into the best talent is not the only reason why many firms are actively engaged in gender initiatives. Initiatives to strike better balance between work and family life, for example, may reduce stress, sickness and absenteeism and make a firm more attractive as a place of work, thus increasing staff retention. Beauregard and Henry (2009) found that the introduction of work-life balance practices does not necessarily resolve potential conflicts between work and life. It does, though, point to the benefits of such practices for company performance, which include improved perceptions and recruitment. That being said, benefits also depend on context, e.g. national factors, job levels and managerial support.

A greater role for women also enhances diversity, which can be valuable for a firm's performance in an increasingly complex world, enabling it to draw on diverse perspectives to

solve problems, take decisions, and enhance leadership. This is important both at board level and other levels of decision making. More women in leadership positions can have a positive trickle-down effect, easing in more inclusive workplace cultures and providing younger women with role models and mentors.

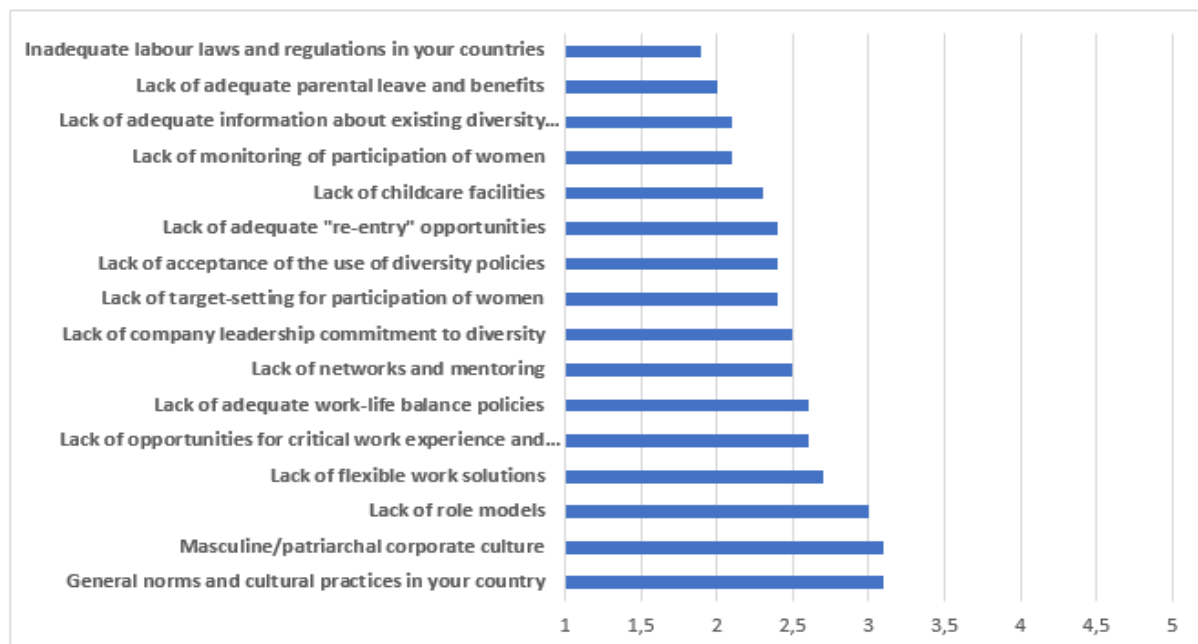
Several studies have also argued that there is a positive relationship between a firm's financial performance and women's presence on boards or at senior management levels (McKinsey and Company, 2008).

Women also account for a large share of the global consumer market and purchasing decisions in households. Companies, in particular those serving consumer markets-may therefore seek women, in order to better understand buying patterns and help to develop the new markets for products which will aim them. Such approach is important in developing countries, where several firms leverage women's networks to reach rural markets that would otherwise be difficult to attain.

There are several factors and policies that contribute to the leaky pipeline, highlighted in figure 2. The biggest barriers are general norms and cultural practices within countries, corporate culture and the lack of role models. The smallest barriers are inadequate labor laws and regulation among countries and lack of adequate parental leave and benefits.

Finally, Bloom et al. (2009) found that better managed firms use more family-friendly workplace practices. Family-run firms are typically poorly managed compared with other businesses, including multinationals (Bloom et al., 2011). We need to address cultural barriers and stereotypes relevant to the role of women in society and business. Awareness campaigns role models are important. It is necessary to foster a broader talent pool of women by identifying women entrepreneurs and female leaders outside of business who can be strong candidates for leadership roles in the corporate world.

Figure 2: Barriers to Women's Rise to Leadership, Average Ratings from 1 to 5



Source: World Economic Forum

3.3 Gender Divides in the Public Domain

Governments are taking steps to ensure equal opportunity for their female and male employees. Early evidence suggests that countries which have implemented proactive measures to ensure equal opportunity and gender balance are making progress in closing gender-representation gaps in the public sector.

Yet, gender imbalances remain in parliaments, judicial systems, the executive branch of government, and the senior civil service. Women are well represented in public-sector employment, but they are over-represented in contractual employment, lower job categories and part-time work. As a consequence, they often earn less than their male counterparts.

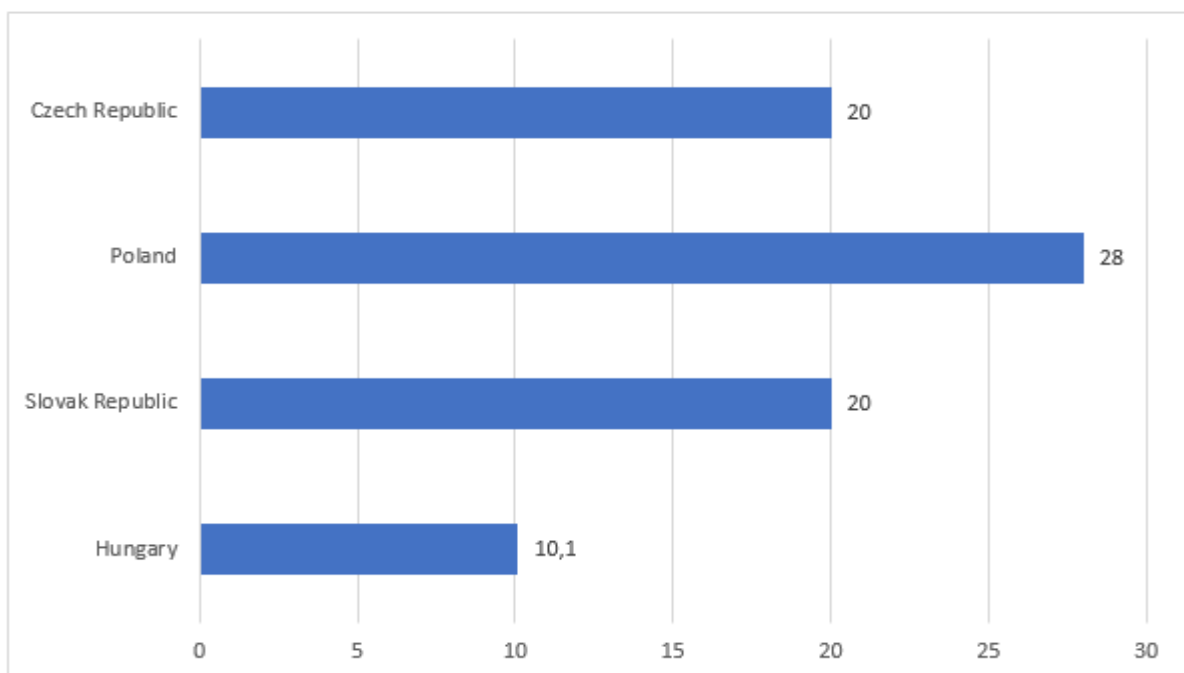
In 2008, women accounted for about 58 % of the total public sector workforce and the public sector about 20 % of overall employment (ILO, 2012). Overall, the public sector provides such attractive employment conditions as diverse career options and paths, relatively stable jobs, flexible working hours and good pay and benefit packages.

There is also tendency for women to occupy senior positions in ministries without key economic or strategic functions. Within the European Union, women occupy 33 % of the highest positions in socio-cultural ministries, but only 22 % in the ministries with economic and key strategic functions.

In 2008, out of the 1022 ministerial portfolios held by women, only six were in defense portfolios. Evidence also suggests that women are under-represented in top public positions with wide-ranging responsibilities.

Across federal ministries and agencies, women are more likely to head the human resources or communication departments than the budget or information technology departments. Women are over-represented in the lower civil service levels in many OECD countries and in “feminized” areas like care, education and health.

Figure 3: Percentage of Parliamentary Seats Occupied by Women in 2015



Source: IPU Database available on: www.ipu.org/wmn-e/classif.htm

The figure 3 shows that, overall, the proportion of female members of parliament has increased in V4 countries in 2011. The highest proportion of female members in parliament in 2011 was in Czech Republic, it has been 22 %. Almost the same situation was in Poland, where was 20 % of female members in parliament in 2011. Slovak Republic had in this year only 16 % of female members, and the lowest representation of female members was in Hungary, only 9 %. From other EU countries the highest representation of female members in parliament was in Sweden, almost 45 % and in Finland (43 % in 2011). The lowest representation of female members in parliament from EU countries was in 2011 in Slovenia, only 14 %.

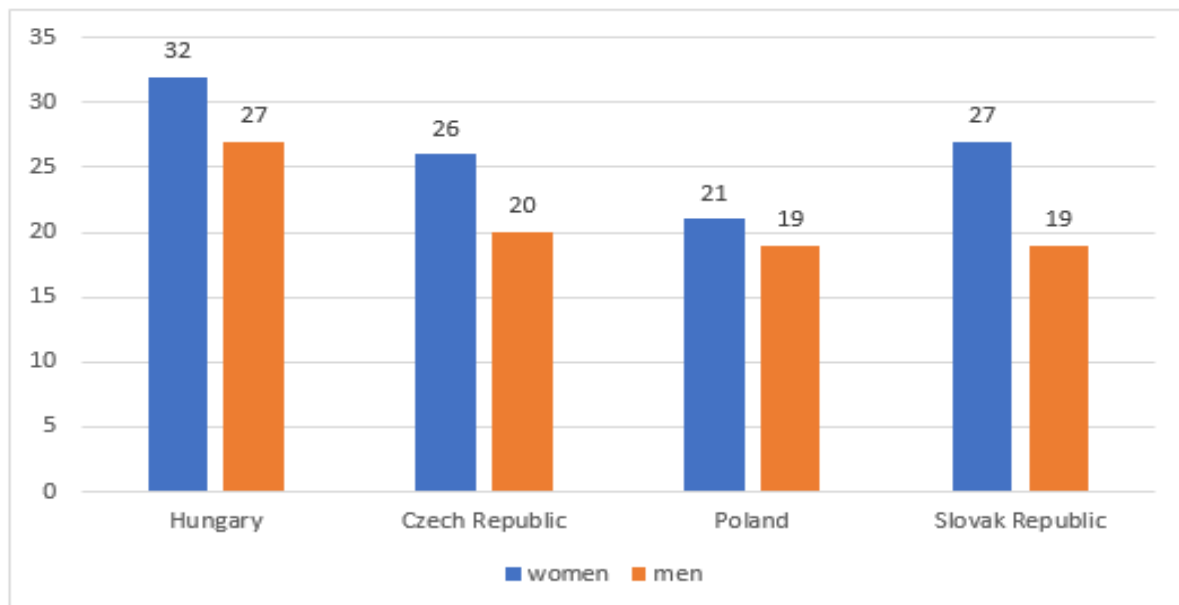
3.5 Motivation and Skills of Women Entrepreneurs

Female-owned enterprises, register in average, lower profits and labor productivity than male-owned ones. The disparities can mostly be explained by differences in size and capital intensity.

Women are significantly under-represented in engineering and computing, two fields of study that build the knowledge useful for starting a technology-oriented business. They are also in the minority in business degrees courses, even though their numbers have been growing.

Figure 4 shows that the percentage of the self-employed with tertiary education attainment is significantly higher among women in V4 countries. In Slovak Republic it was in 2010 27 % of self-employed women, what is 8 % more than men. The lowest difference has been in Poland, 21 % of self-employed women with completed tertiary education and 19 % men.

Figure 4: Percentage of Self-employed Women and Men who Completed Tertiary Education in 2010 in V4 Countries



Source: Eurostat Labour Force Surveys.

Shinnar et. al (2009) found that business graduates rate themselves as more entrepreneurial than those who obtained degrees in non-business studies, and they are more likely seriously considering to start with their own business. Entrepreneurship education in primary and secondary schools is increasingly recognized as key to shaping the entrepreneurial attitudes of young women and men.

Women entrepreneurs tend to have less experience than men as business owners. For example on average across 15 European countries, only 11,2 % of women who started a new enterprise

in 2002, had run another business before start-up, compared with 18,4 % of men (Eurostat,2008).

4. Conclusion

Women's entrepreneurship policies are oftensimply conceived as a subset of policies for start-ups and for very small firms. The assumptions that female business owners want to stay small is misleading for policy. There is a substantial pool of women who are eagerly pursuing growth strategies for their companies (Gatewood et al., 2009). A stronger focus should be placed on instruments that can help female businesses to realize their aspiration for growth. Examples of growth-focused initiatives for female-owned enterprises of all size would be: favorable lending ceilings and public credit guarantees; rules ensuring that small, female-owned firms have access to public procurement; tax credit schemes for capital investments.

Successful entrepreneurship requires talent, motivation and entrepreneurial skills and because women often lack entrepreneurial experience, they have less opportunity to build their entrepreneurial skills. Media campaigns and entrepreneurial education at schools can reduce the stigma associated with business failures, as could be showcase stories of women-entrepreneurs, who made it to the top through learning from trial and error. Policy makers could also design more innovative training programmes by promoting greater interaction between successful and nascent women entrepreneurs through associations and networks. Klein and Wayman (2008) and Bauer (2011) found out that training programmes improve both the economic and non-economic lives of women who own small and micro business.

It is important to address cultural barriers and stereotypes relevant to the role of women in society and business. Awareness campaigns and role models are important. Data and statistic can be useful tools for measuring progress. It is also necessary to foster a broader talent pool of women by identifying women entrepreneurs and female leaders outside of business who can be strong candidates for leadership roles in the corporate world.

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Estimation of Demand for Alcohol in Slovakia

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Abstract

This paper estimates demand for beer, wine, and spirits in Slovakia for the period from 2006 to 2012. Ordinary least squares models and truncated regression models are used on Household Budget Survey micro data. Own and Cross price elasticities are computed. The empirical model contains also a series of demographic and social variables that serve as controls. All own-price elasticities are negative. The most inelastic are spirits, higher sensitivity to price change has wine and beer. Differences in alcohol consumption across demographic and social variables are also presented.

Keywords: demand for alcohol, price elasticity, OLS, truncated regression

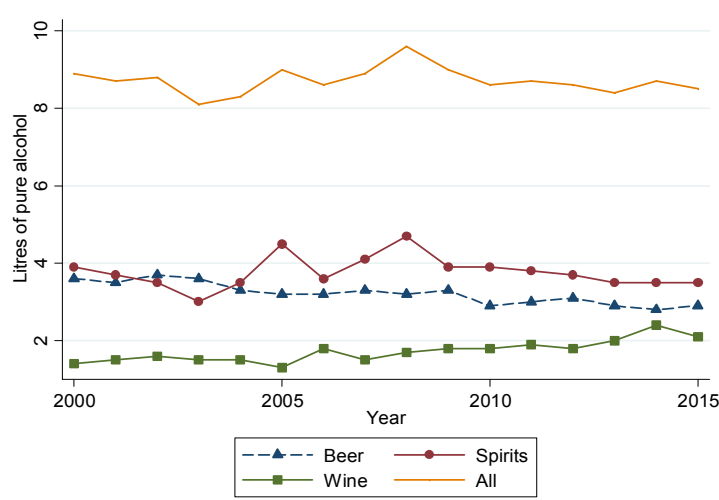
JEL Classification: C24, I1, Q11

1. Introduction

Alcohol is often associated with harmful effect on health. The consumption of alcohol beverages causes health and social consequences, like damage to brain cells and liver, depression, nerve damage, changes in mental status and injuries including traffic accidents. Consumption over a number of years can lead to chronic addiction with serious impact on social life (WHO, 2016).

In Slovakia, drinking is quite common and tolerated. Average alcohol per capita (15+) consumption was in 2008 – 2010 on level 13 litres of pure alcohol (10th place in world ranking). In comparing with neighbouring countries, Ukraine (6th place), Hungary (8th place) and Czech (9th place) have higher and Poland (14th place) with Austria (36th place) lower consumption. 46 % of consumption in Slovakia represent spirits, on the second place is beer (30 %), then wine (18 %) and as least other with 6 % as is shown in the study of WHO, 2014.

Figure 1: Alcohol consumption in Slovakia per capita



Source: Statistical Office of the Slovak Republic, authors' calculations

Income has important effect on demand for alcohol. With higher individual income risk to be drinker is rising. Higher income increase consumption of quality alcohol instead of moonshine (Andrienko, Nemtsov, 2005). Every alcoholic beverage is positively correlated with income. Quantity of demanded alcohol rises when income increase, but doesn't fall when income decrease, which support the theory that alcohol is a vice good (Reed, 2013). According to Jiang *et al.*, 2016, lower income groups have higher price elasticity than higher income groups.

As mentioned by Andrienko and Nemtsov, 2005, alcohol has serious negative outcomes for health, which is why it should be treated differently from other goods. It is in the public interest to regulate consumption and keep public health on the best possible level. Common mechanism to reach it is taxation that has influence on price formation and as we know from economic literature, increase of price cause decreasing of demand curve. But that policy in Russia is accompanied by substitution of legal alcohol for illegal, in particular moonshine. The major part of consumption in Russia (51 %) consist of spirits (WHO, 2014), which is similar percentage like in Slovakia. So there remains question, whether higher tax of alcohol, especially on spirits in Slovakia will lead to lower demand or just to change type of beverage.

There is many studies confirming that higher taxes on alcohol decrease acute consequences of drinking and reduce its consumption (Farrell, Manning, Finch, 2002, Andrienko, Nemtsov, 2005, Jiang *et al.*, 2016), which shows estimated own price elasticities. In additional, cross-price elasticities shows strong substitution and complementary relationships among different type of alcoholic drinks. Therefore, tax policies should be applied on alcohol generally, not just on particular type of beverage.

There is also different between the on trade alcohol (bars, pubs, restaurant, etc.) and the off trade alcohol (grocery, independent retail, etc.) elasticities (Young, 2015). All the alcohols on trade is more elastic than the off trade, which is understandable. Results in UK demand for alcohol suggest that cider and spirits are more elastic then beer and wine (Collis, Czubek, Johal, 2010).

What is special about alcohol is fact that it is classified as addictive goods, so we can assume that people who keep consumption on the same level could be less sensitive to price change (Andrienko, Nemtsov, 2005). It has connection with substituting one kind of beverage for another, or more expensive alcohol for cheaper. This conclusion also confirm Saffer, Dave, Grossman, 2012. Results from their research display that heavy drinkers are less responsive to price than moderate drinkers, but they are more influence to advertising (like TV), so they suggest impose restriction on advertising to reduce heavy consumption and higher excise taxes on alcohol to reduce consumption by moderate drinkers.

Advertisements and alcohol promotions have positive association with number of drinks consumed, according to study in college campuses. Frequent promotions, low sale prices and large pack of alcohol caused higher binge drinking rates. As solution Kuo *et al.*, 2003, suggest regulation of marketing practices.

Based on meta-analyses provided by Anderson *et al.*, 2009 show that policies focused on price and availability of alcohol are effective in reducing alcohol consumption, also changes in legislation about drink-driving are effective too. Education programmes at school, providing information in public are, however, not effective. As solution to high unrecorded alcohol production and consumption they propose increasing the proportion of taxed alcohol which could be more effective than just increase in tax.

How difficult is find an optimal alcohol excise is writing Cnossen, 2007. Except one member state (Finland) the effective duty doesn't exceed the lower bound of the external costs on

harmful drinking, i.e. health care, criminal justice system, prevention/treatment, traffic accidents damage. Similar results show Manning *et al.*, 1989 who estimated net external costs about US\$0.48 per ounce of ethanol. This is double the average state and federal tax.

Effect of policies to reduce abuse and drug consumption is similar on all demographic groups (Saffer, Chaloupka, 1998), but racial and ethnic minorities consume less or equal amounts of alcohol than the total population. It is because they consume more cocaine. Complementarity between alcohol and illegal drugs shown that drug using is also reduce by alcohol taxes.

Heavy drinking is less price elastic than is moderate or light drinking, (Manning, Blumberg, Moulton, 1994) even upper fifth percentile (who consume 36 % of all alcohol) of drinkers have elasticity not statistically significant from zero. On the other hand, moderate and light drinkers have good response to price elasticity, therefore these types of consumption can be decrease by taxes.

Also it matters on age of drinkers. Moore, Cook, 1995, show that tax increase leads to reduction in quantity of consumed alcohol by youths. Controlling drinking by legal drinking status appears to be effective more for females than for males, so sex is important factor too. Youths exposed to alcohol restrictions drink less, not just now but also in later years. Those who drink heavily now are more likely to drink as much or more in the future.

According to study in Russia older consumers are more persistent in drinking and men have higher consumption of alcohol and cigarette than women. Higher income lead to increase in alcohol consumption, but there is a possibility that education can help stop this trend (Herzfeld, Huffman, Rizov, 2013).

Reducing consumption of alcohol won't necessarily cause changes in employment in sectors connected with alcohol, e.i. pubs, restaurants, as show report of the European Commission (Anderson, Baumberg, 2006).

Estimation of elasticities of demand for alcohol was subject of many studies in history, we mentioned some of them and there are also two meta-analysis that are composed from 112 and 132 studies.

Table 1: Historical estimated elasticity of demand for alcohol

Year	Author		Beer	Wine	Spirits
1991	Clements and Selvanathan		-0.15	-0.32	-0.61
1995	Blake and Nied		-0.95	-1.32	-0.93
2002	Duffy		-0.39	-0.14	-0.67
2007	Gallet (meta-analysis)		-	-0.28	-0.26
2009	Wagenaar, Salois, Komro (meta-analysis)		-0.17	-0.3	-0.29
2005	Selvanathan and Selvanathan		-0.27	-0.35	-0.56
2010	Collis et al	on trade	-0.77	-0.46	-0.56
		off trade	-1.11	-0.54	-1.16
2013	Sornpaisarn, Shield, Cohen, Schwartz, Rehm		-0.5	-	-
2014	Meng	on trade	-0.79	-0.87	-0.89
		off trade	-0.98	-0.38	-0.08
2014	Sousa	on trade	-0.34	-0.24	-1.25
		off trade	-0.74	-0.08	-0.45

Source: Estimation of price elasticities of demand for alcohol in the UK.(Sousa, 2014, page 5), update version

2. Data and Methods

Estimation of demand for alcohol has quite big difference compared to estimating demand for other goods that we usually consume and that there is notable group of households with zero expenditure on consumption, therefore zero alcohol consumption. Because of that, we have to take it into account in choosing the appropriate model. Using of household microdata brings often econometric problem when some households have zero consumption. In this case, by OLS regression estimates coefficients are inconsistent and biased (Amemiya, 1984). OLS provides a linear approximation for our non-linear censored regression. This line is flatter than the regression for uncensored data. We need to realize difference between censoring and truncation and how both change the conditional mean and conditional density (Cameron, Trivedi, 2005).¹¹ Censoring is a problem of data collection – value of the y is unobserved below or above a certain threshold. Truncation can be caused by survey design, that means some possible observations above or below threshold are dropped from the sample. Second possibility called incidental truncation occurs when decision to consume alcohol or not is not caused by survey's design but by agents choice. Our data consist of 34 373 households and zero expenditure on alcohol have 8 366 of them. Sousa, 2014 presents several reasons why people don't consume alcohol:

- price is too high, so they can't afford it,
- cultural, religious or lifestyle reasons,
- age restriction.

There is always possibility of statistical errors.

Obviously, we cannot just use OLS, because it would be biased. It's possible use sub-sample (truncated sample) for OLS, and OLS would be *unbiased* when:

- sample selection is random,
- sample selection is determined by independent variables.

In case of sample selection determined by dependent variable (like our data), OLS is *biased*. In this case we can use *Truncated regression*.

Truncated Regression Models

This regression model is estimated by maximum likelihood. Error terms are normally, independently and identically distributed.

Regression function for the latent variable is $X_t\beta$, then probability that y_t is included in the sample is

$$\begin{aligned}\Pr(y_t \geq 0) &= \Pr(X_t\beta + u_t \geq 0) \\ &= 1 - \Pr(u_t < -X_t\beta) = 1 - \Pr(u_t/\sigma < -X_t\beta/\sigma) \\ &= 1 - \Phi(-X_t\beta/\sigma) = \Phi(X_t\beta/\sigma).\end{aligned}\quad (2.1)$$

Density of y_t is

$$\frac{\sigma^{-1}\phi(y_t - X_t\beta/\sigma)}{\Phi(X_t\beta/\sigma)}.\quad (2.2)$$

¹¹ More information in chapter 16. Tobit and Selection Models in Cameron, A.- Trivedi, P. 2005. Microeconometrics Methods and Applications. Cambridge University Press

And loglikelihood function that is sum over all t of the log of the density of y_t conditional on $y_t \geq 0$, is (Orme and Ruud, 2002)

$$\ell(y, \beta, \sigma) = -\frac{n}{2} \log(2\pi) - n \log(\sigma) - \frac{1}{2\sigma^2} \sum_{t=1}^n (y_t - X_t \beta)^2 - \sum_{t=1}^n \log \Phi(X_t \beta / \sigma). \quad (2.3)$$

We use data from Household Budget Survey, Statistical Office of Slovak Republic, National Bank of Slovakia and from Ministry of Finance of Slovak republic. HBS is focusing on consumption expenditure and currently is conducting in all 28 EU member states (Clotuche, 2003). For our research we use HBS for Slovakia 2006 – 2012.

Because of missing prices we calculated them by dividing expenditure on alcohol by quantities of alcohol consumed by household. This calculation method also used Sousa, 2014. There remains households with zero consumption and therefore with zero prices. For these households we calculated average prices by region, quarter and year and substitute the missing prices with these average prices. The same approach suggest Cox and Wohlgenant (1986).

Table 2: Average alcohol prices per liter in the dataset (2006-2012)

Region	Beer		Wine		Spirits	
	Nominal price	Real price	Nominal price	Real price	Nominal price	Real price
BA	1.002	0.918	3.193	2.925	9.265	8.478
TT	0.913	0.837	2.886	2.645	8.924	8.170
TN	0.952	0.872	2.866	2.627	8.612	7.880
NR	0.935	0.856	3.008	2.765	8.861	8.115
ZA	0.980	0.897	2.999	2.748	8.957	8.198
BB	0.960	0.879	2.812	2.574	8.792	8.042
PO	0.937	0.859	2.757	2.528	8.708	7.977
KE	0.965	0.884	2.886	2.648	8.598	7.885

Source: Household Budget Survey, NBS, authors' calculations.

In base of literature review, we can consider several variables which can influence demand for alcohol. As a depend variable we used monthly consumption of beverages of household. We estimated models for beer, wine and spirits separately. Explanatory variables, which we included to models are presented below.

Table 3: Variables Entering the Model

Dependent variables (Y_j)	Definition
beer	monthly consumption of household in litres
wine	monthly consumption of household in litres
spirits	monthly consumption of household in litres
Explanatory variables (P_j)	Definiton
price_Spirits	real price of spirits per liter

price_Wine	real price of wine per liter
price_Beer	real price of beer per liter
Control variables (X_i)	Definition
ln_eq_exp_total	log equalised total monthly expenditure of household in EUR
age_hh	age of head of household
smoking	dummy variable, 0 – household has zero expenditure on tobacco, otherwise 1
male_hh	dummy variable, gender of head of household man – 1, woman – 0
education	dummy variables for primary, secondary and university education
year	trend for period 2006 - 2012
region	dummy variables for 8 regions of Slovakia
n_adults	number of family member older than 18 years (national legal minimum age for sales of alcoholic beverages)
employed_hh	dummy variables for work status of head of household, employed – 1, unemployed and economically inactive person - 0

Source: Household Budget Survey, NBS.

Table 3 represents variables used in model. Because we want to know how consumption of alcoholic beverages is changing according to main factors we discussed above, response variable is represented by monthly consumption of household in litres. So we estimated models that showed influence on consumption of three kind of beverages – beer, wine and spirits. Income of household can be by someone considered as one of the main factors affecting the consumption, but this view don't have to be right. Actually during modelling alcohol consumption in our first models, influence of income has no statistical significance. Similar finding mentioned Gujarati, 2011 connect with smoking. It has several reason. Firstly, expenditure on smoking and also our expenditure on alcohol may be a small proportion of family income in most households and secondly, alcohol consumption is strongly influenced by social and demographic characteristics.

According to Sousa, 2014 we decided use total expenditure instead of income. He notes following reasons:

- income is often miss-reported,
- its fluctuate more than expenditure,
- poor individuals are more likely to over report and rich individuals are more likely to under-report their income.

There is one important adjustment called *equalisation of expenditure*. We need to capture fact that higher income increases the affordability of alcohol, but also at the same time higher number of people in a household decrease disposable income per head. Equalisation use the square root scale and we followed OECD practice – it consists of dividing total expenditure by the square root of number of people in a household.

As we mentioned, alcohol consumption is strongly influenced by social and demographic characteristics (Gujarati, 2011, Sousa, 2014) and therefore we included age, sex, education and smoking in model too.

3. Results

Total number of observation is 34 373. Observations are evenly distributed across 8 regions (12.3 – 12.6 % of observations to region). Average household size is 2.72, the smallest household has only 1 member and the biggest in our data set has 10 family members. 75.7 % of households consume alcohol, mainly beer, then wine and spirits.

Table 4: Household characteristics

Household size	Mean	Min	Max
BA	2.34	1	8
TT	2.61	1	9
TN	2.76	1	9
NR	2.62	1	10
ZA	3.05	1	10
BB	2.46	1	10
PO	3.10	1	9
KE	2.84	1	10
SR	2.72	1	10

Source: Household Budget Survey, NBS, authors' calculations.

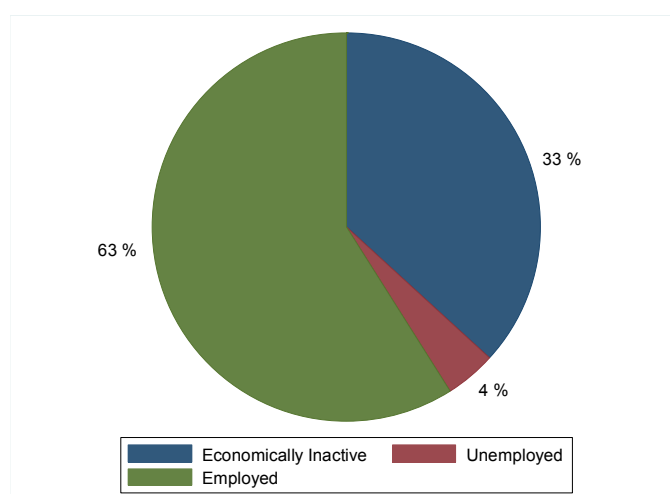
Table 5: Drinking and non-drinking households

Households	Drinking		Non-drinking	
	Frequency	in %	Frequency	in %
Drinking alcohol	26007	75.7%	8366	24.3%
Drinking beer	19488	56.7%	14885	43.3%
Drinking wine	14846	43.2%	19527	56.8%
Drinking spirits	13860	40.3%	20513	59.7%

Source: Household Budget Survey, NBS, authors' calculations.

Majority of respondents were employed, about 33 % were economically inactive and 4 % of respondents were unemployed.

Figure 2: Distribution of observations across socio-economic group



Source: Household Budget Survey, NBS, authors' calculations.

The highest average expenditure on alcohol of one household are in Zilina region (15.15). What's surprising, in Bratislava, the richest region are one of the lowest (9.75). East regions (Presov, Poprad) have higher consumption while income in this regions is low. Also max expenditure (315.00) was observed in Presov region. For comparison we present data about GDP in thousands EUR per capita, average wage and unemployment rate in %. All variables are average of values from years 2006 – 2012.

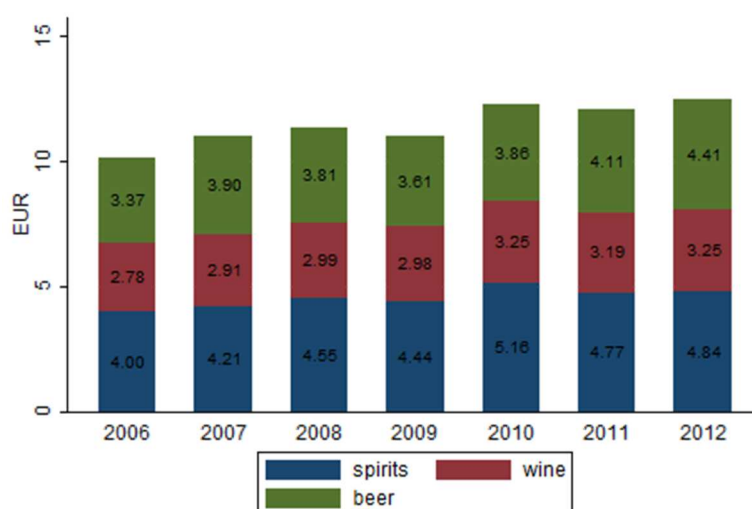
Table 6: Expenditure on alcohol by region

Region	Expenditure on alcohol (EUR)	Max expenditure (EUR)	GDP (K EUR)	Wage (EUR)	Unemployment rate (%)
BA	9.75	193.23	29.32	1 155.32	3.81
TT	10.15	191.60	13.88	796.32	6.95
TN	11.81	139.95	10.97	747.76	7.87
NR	9.61	206.10	10.42	730.19	10.63
ZA	15.15	181.29	10.41	774.83	9.32
BB	8.75	186.90	8.90	729.05	17.59
PO	12.31	315.00	7.00	676.86	16.32
KE	11.63	182.00	9.79	813.03	16.30

Source: Household Budget Survey, NBS, Statistical Office of the Slovak Republic, authors' calculations.

Average expenditure on alcohol rise over year except year 2009 where was a little decrease in expenditure on every type of alcohol. In 2006 were total expenditure on alcohol a little over 10 EUR, in 2012 it was about 12 EUR. Expenditure on spirits reach the top in 2010 (5.16 EUR) and after that they are decreasing. Last three year of our research are expenditure on wine about the same level. On the other hand, expenditure on beer still grow. Detail number are shown in the picture 3.

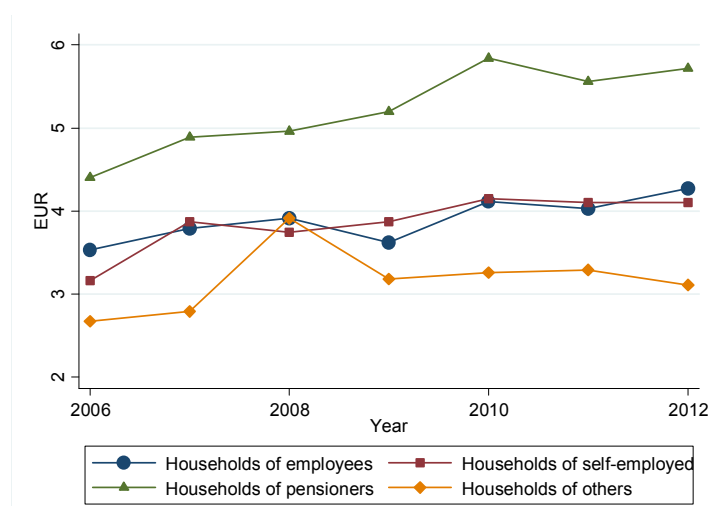
Figure 3: Average expenditure of household on alcohol by year and type of beverage



Source: Household Budget Survey, NBS, authors' calculations.

For comparison we also include data from Statistical Office of Slovak Republic, where data are calculated per one person of household. Average household has around 2,6 family members¹², so we can see that numbers from picture 3 and 4 are more less similar. From distribution of households in picture 2 we see that households consist of member who are employees and self-employed person has similar expenditure on alcohol. The highest expenditure on alcohol show pensioners, the lowest households of others.

Figure 4: Average expenditure of households on alcohol per person



Source: Statistical Office of the Slovak Republic, authors' calculations.

Estimations

In this part we present price elasticities estimate with Truncated regression models, using logarithmic data. We estimate three models – for beer, wine and spirits. Results are represented below in the Table 8. For comparison we also estimated OLS models (Table 7).

Table 7: Estimated price elasticity of demand for alcohol using OLS

	spirits	wine	beer
spirits	-0.30***	-0.02	-0.16***
wine	-0.07***	-0.72***	-0.19***
beer	-0.07***	-0.01	-0.94***

Source: authors' calculations.

Note: $p < .05$ *, $p < .01$ **, $p < .001$ ***

Table 8: Estimated price elasticity of demand for alcohol using Truncated regression model

	spirits	wine	beer
spirits	-0.13***	0.01	-0.03
wine	-0.06***	-0.51***	-0.07***
beer	-0.04**	0.02	-0.74***

Source: authors' calculations.

Note: $p < .05$ *, $p < .01$ **, $p < .001$ ***

¹² Number from Statistic Office of Slovak Republic, 2011

Considering logarithmic transformation, coefficient could be interpreting as elasticities. Own price elasticities of spirits and wine are inelastic. Cross-price elasticities are all strongly inelastic. We can see differences in coefficients estimated by classic OLS model and Truncated regression – coefficients from OLS are biased, because households with zero consumption shift results.

Table 9: Estimated socio-demographic coefficients using Truncated regression model

	Beer	Wine	Spirits
ln_eq_exp_total	29.8%	44.4%	64.0%
age_hh	-0.2%	0.4%	0.2%
male_hh	6.2%	12.7%	41.9%
employed_hh	-1.9%	-1.7%	-7.6%
edu2	-2.9%	3.5%	-7.6%
edu3	-5.9%	5.6%	-17.1%
n_adults	3.1%	4.0%	10.4%
smoking	3.3%	-0.8%	10.5%
q1	-3.7%	-6.7%	-3.0%
q2	-3.5%	-6.4%	9.3%
q3	-4.7%	-5.9%	16.4%
TT	-1.4%	-1.7%	9.3%
TN	5.9%	0.2%	-1.6%
NR	6.2%	-5.2%	5.5%
ZA	14.4%	4.2%	4.6%
BB	3.3%	-7.5%	0.9%
PO	16.2%	-11.5%	2.3%
KE	16.9%	-10.7%	-1.8%
year	0.0%	0.1%	1.6%

Source: authors' calculations.

Smoking households consume more beer and spirits than non-smoking households. Households with woman as a head consume less amount of alcohol, specifically 41.9 % less beer, 12.7 % less wine and 6.2 % less spirits. Higher education (secondary and university) affect negatively consumption of beer and spirits, but positively consumption of wine. Alcohol consumption of beer in time has rising trend. Consumption of beer in the second and third quarter is higher in comparison with fourth quarter. The lowest is in the first quarter. On the other hand, consumption of wine and spirits is the highest in fourth quarter. East Slovakia (PO and KE regions) consume about 11 % less wine, but more than 16 % more spirits in comparison with BA region. One of the highest spirits consumption has also Zilina region. Unemployed and inactive have higher consumption of alcoholic beverages. Detail models are in appendix.

4. Conclusion

The main aim of this paper was estimation of demand for alcoholic beverages – beer, wine and spirits. We estimated own and cross-price elasticities of demand by application an OLS model and Truncated regression model on data from Household Budget Survey from 2006 to 2012. This estimator is used because of large amount of households with zero alcohol consumption. Achieved results are shown in Table 8. All elasticities are inelastic (less than 1), price change

has the smallest impact on spirits, bigger on wine and beer. Own-price elasticities are highly significant. Cross-price elasticities are strongly inelastic.

An influence of various socio-demographic characteristics are detailed shown in appendix. Households with man as a head have higher alcohol consumption. Lower consumption have families, where is the head of household employed. Education contributes to lower consumption of beer and spirits, but to higher expenditures to wine. Smoking households have higher alcohol consumption. Consumption of beer is in the second and third quarter higher in comparison with first and fourth quarter. East Slovakia consume more spirits and less wine. One of the highest spirit consumption is also in Zilina region. Consumption of beer is the highest in Trnava region.

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Appendix 1

Truncated regression

Limit: lower =	0	Number of obs	13860
upper =	+inf	Wald chi2(23)	1707.6
Log likelihood = -			
4290.4169		Prob > chi2	0

ln_c_spirits	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]
ln_price_spirits	-0.1330947	0.012378	-10.75	0	-0.15735 -0.10884
ln_price_wine	-0.0641741	0.009475	-6.77	0	-0.08274 -0.0456
ln_price_beer	-0.0405343	0.016241	-2.5	0.013	-0.07237 -0.0087
ln_eq_exp_total	0.2611303	0.00913	28.6	0	0.243235 0.279025
age_hh	-0.0015235	0.00172	-0.89	0.376	-0.0049 0.001848
age_hh2	8.84E-06	1.67E-05	0.53	0.597	-2.4E-05 4.16E-05
male_hh	0.0601545	0.008124	7.4	0	0.044231 0.076078
employed_hh	-0.0192554	0.010265	-1.88	0.061	-0.03937 0.000863
edu2	-0.029555	0.012736	-2.32	0.02	-0.05452 -0.00459
edu3	-0.0606117	0.015718	-3.86	0	-0.09142 -0.02981
n_adults	0.0308146	0.003728	8.27	0	0.023508 0.038121
smoking	0.0327091	0.007015	4.66	0	0.018959 0.046459
q1	-0.0379565	0.009332	-4.07	0	-0.05625 -0.01967
q2	-0.0359924	0.009115	-3.95	0	-0.05386 -0.01813
q3	-0.0483966	0.009221	-5.25	0	-0.06647 -0.03032
TT	-0.0144118	0.014888	-0.97	0.333	-0.04359 0.014767

TN	0.0573556	0.014554	3.94	0	0.02883	0.085882
NR	0.0603661	0.01477	4.09	0	0.031419	0.089314
ZA	0.1344921	0.013792	9.75	0	0.107461	0.161523
BB	0.0324179	0.01513	2.14	0.032	0.002765	0.062071
PO	0.1498466	0.014001	10.7	0	0.122406	0.177287
KE	0.156016	0.01402	11.13	0	0.128538	0.183494
year	0.0002496	0.001893	0.13	0.895	-0.00346	0.00396
_cons	-1.119281	3.793195	-0.3	0.768	-8.55381	6.315245
/sigma	0.3623663	0.00268	135.23	0	0.357114	0.367618

Appendix 2

Truncated regression

Limit: lower = 0 Number of obs 14846
upper = +inf Wald chi2(23) 4023.92
Log likelihood = -9647.4472 Prob > chi2 0

ln_c_wine	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]
ln_price_spirits	0.0137624	0.021298	0.65	0.518	-0.02798 0.055506
ln_price_wine	-0.5142543	0.010038	-51.23	0	-0.53393 -0.49458
ln_price_beer	0.0168599	0.021242	0.79	0.427	-0.02477 0.058493
ln_eq_exp_total	0.367541	0.011825	31.08	0	0.344365 0.390717
age_hh	0.0035943	0.002294	1.57	0.117	-0.0009 0.008091
age_hh2	-0.0000341	2.27E-05	-1.5	0.133	-7.9E-05 1.04E-05
male_hh	0.1193595	0.010542	11.32	0	0.098697 0.140022
employed_hh	-0.0169445	0.013659	-1.24	0.215	-0.04372 0.009827
edu2	0.0342411	0.018444	1.86	0.063	-0.00191 0.070391
edu3	0.054023	0.021421	2.52	0.012	0.012039 0.096007
n_adults	0.0388226	0.005005	7.76	0	0.029014 0.048632
smoking	-0.0081094	0.00936	-0.87	0.386	-0.02645 0.010236
q1	-0.0690671	0.012195	-5.66	0	-0.09297 -0.04517
q2	-0.0661683	0.011937	-5.54	0	-0.08956 -0.04277
q3	-0.0609738	0.011923	-5.11	0	-0.08434 -0.03761
TT	-0.0173171	0.018003	-0.96	0.336	-0.0526 0.017968
TN	0.0018818	0.0168	0.11	0.911	-0.03105 0.034809
NR	-0.053636	0.01903	-2.82	0.005	-0.09093 -0.01634

ZA	0.0415375	0.016526	2.51	0.012	0.009148	0.073927
BB	-0.0781171	0.018722	-4.17	0	-0.11481	-0.04142
PO	-0.1224614	0.017776	-6.89	0	-0.1573	-0.08762
KE	-0.1136668	0.018493	-6.15	0	-0.14991	-0.07742
year	0.0010472	0.002534	0.41	0.679	-0.00392	0.006014
_cons	-2.966871	5.071618	-0.58	0.559	-12.9071	6.973317
/sigma	0.4983434	0.003371	147.83	0	0.491736	0.504951

Appendix 3

Truncated regression

Limit: lower =	0	Number of obs	19488
upper =	+inf	Wald chi2(23)	4122.36
Log likelihood = -	20537.627	Prob > chi2	0

ln_c_beer	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ln_price_spirits	-0.0265604	0.027743	-0.96	0.338	-0.08094	0.027816
ln_price_wine	-0.0659307	0.016074	-4.1	0	-0.09744	-0.03443
ln_price_beer	-0.7384882	0.02254	-32.76	0	-0.78267	-0.69431
ln_eq_exp_total	0.4948215	0.014656	33.76	0	0.466096	0.523547
age_hh	0.0015479	0.002888	0.54	0.592	-0.00411	0.007208
age_hh2	-0.0000258	2.84E-05	-0.91	0.364	-8.1E-05	2.99E-05
male_hh	0.3502412	0.013852	25.28	0	0.323092	0.377391
employed_hh	-0.0789014	0.01694	-4.66	0	-0.1121	-0.0457
edu2	-0.078523	0.021712	-3.62	0	-0.12108	-0.03597
edu3	-0.1878359	0.026243	-7.16	0	-0.23927	-0.1364
n_adults	0.0990315	0.006285	15.76	0	0.086714	0.111349
smoking	0.099762	0.011494	8.68	0	0.077235	0.12229
q1	-0.0305199	0.016384	-1.86	0.062	-0.06263	0.001591
q2	0.0885439	0.015307	5.78	0	0.058543	0.118545
q3	0.1515297	0.015159	10	0	0.121818	0.181242
TT	0.0886304	0.023363	3.79	0	0.04284	0.134421
TN	-0.016224	0.022954	-0.71	0.48	-0.06121	0.028764
NR	0.0533627	0.023423	2.28	0.023	0.007454	0.099272
ZA	0.0451568	0.022506	2.01	0.045	0.001046	0.089268

BB	0.0092951	0.023729	0.39	0.695	-0.03721	0.055804
PO	0.0226763	0.02308	0.98	0.326	-0.02256	0.067911
KE	-0.0182118	0.023228	-0.78	0.433	-0.06374	0.027314
year	0.0157018	0.003146	4.99	0	0.009537	0.021867
_cons	-33.2186	6.292586	-5.28	0	-45.5519	-20.8854
/sigma	0.7300476	0.004171	175.02	0	0.721872	0.738223

Creating competitive strategy through the use of Intelligent technology

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Abstract

As the increasing competitive intensity in the current service market, organizational capabilities have been recognized as the importance of sustaining competitive advantage. The profitable growth for the firms has been fueled a need to systematically assess and renew the organization.

The purpose of this study isto analyze the financial performance of the firms to create an effective evaluating structure for the Taiwan's service industry. This study utilized TOPSIS (technique for order preference by similarity to ideal solution) method to evaluate the operating performance of 11 trade enterprises. TOPSIS is a multiple criteria decision making method to identify solutions from a finite set of alternatives based upon simultaneous minimization of distance from an ideal point and maximization of distance from a nadir point. By using this approach, this study measures the financial performance of firms through two aspects and ten indicators.

The result indicated e-life had outstanding performance among the trade enterprises. The findings of this study provided managers to better understand their market position, competition, and profitability for future strategic planning and operational management.

Keywords: *Intelligent technology, Technique for Order Preference by Similarity to Ideal Solution, Trade enterprises, Competitive strategies, Neural network.*

JEL Classification: *F17, C53, D22.*

1. Introduction

Previous literatures on the operations strategy studies have emphasized on the deployment and use of capacity management and demand management strategies. Specifically, studies have emphasized on the influence decisions on the operational performance and how to measure the performance [1]. As the rapid increases in globalization of business activities, increasing numbers of firms have developed strategies to expand their operations into a fiercely competitive market. However, the importance of identifying and understanding factors likely to produce sustained competitive advantage, growth, and enhanced firm financial performance have become even more important to the managers and shareholders [2]. Specially, in such a highly competitive market, it is of strategic importance for firms to understand their relative level of competitiveness in terms of critical elements affecting their competitive advantage [3].

Thus, a firm's competitive advantage can be sustained when it implements a strategy that is not easily to copy by its competitors. In addition, how to leverage resources in creating sustaining competitive advantage for a firm has become the central focus for marketing scholars that link various types of market-based assets, and capabilities with the ultimate financial performance of a firm [4].

As a result, a wide variety of competitive analysis techniques have been developed for organizations to understand their industries and their competitors. However, the evaluation outcomes help firms to identify its competitive related to its competitors. In this study, TOPSIS was used as the evaluating method to identify the oval performance for the retailer sector. In this study, 11 trade enterprises were chosen with two aspects, capability of management and

capability of profit-earning. Thus, this study is intended to investigate the ranking of overall financial performance for 11 trade enterprises in term of their abilities to operate in the current market.

2. Data and Methods

Therefore, study of theoretical basis of complex economic analysis and internal control of trade enterprises activity in competitive environment has given an opportunity to define the means of its improvement.

In order to evaluate investment opportunities and develop corporate strategy for a trade enterprise, we propose to utilize the method of multi-criterion analysis of competitive advantage grading by similarity to ideal solution TOPSIS (Technique for Order Preference by Similarity to Ideal Solution).

Analysis of an enterprise strategic development based on TOPSIS can be applied for competitive advantages evaluation in balanced scoring system includes the following stages (Chen, L., 2008).

3. Results and Discussion

Structuring the problem in hierarchical arrangement contains the following stages.

1. Construction of paired comparison matrix for input data. Accounting for use of k criteria (C_1, C_2, \dots, C_k) for evaluating m objects (A_1, A_2, \dots, A_m), input data for matrix evaluation is as follows (formula 1):

$$X = \begin{matrix} & C_1 & C_2 & \dots & C_k \\ \begin{matrix} A_1 \\ A_2 \\ \dots \\ A_m \end{matrix} & \begin{bmatrix} x_{11} & x_{12} & \dots & x_{1k} \\ x_{21} & x_{22} & \dots & x_{2k} \\ \dots & \dots & \dots & \dots \\ x_{m1} & x_{m2} & \dots & x_{mk} \end{bmatrix} \end{matrix} \quad (1)$$

If input data contains negative values, formula 2 is used for technique implementation:

$$f_j(x) = \frac{A_j - B_j}{\text{sign}(A_j) \times |A_j| - \text{sign}(B_j) \times |B_j|} \times [x - \text{int}(B_j)], \quad j = \overline{1, k}, \quad (2)$$

where $\text{sign}(x)$ – is a mathematical function of actual variable calculated as follows:

$$\text{sign}(x) = \begin{cases} -1, & x < 0 \\ 0, & x = 0 \\ 1, & x > 0 \end{cases};$$

$\text{int}(x)$ – quotient of number x ;

$$A_j = \max(x_{1j}, x_{2j}, \dots, x_{mj}), \quad j = \overline{1, k};$$

$$B_j = \min(x_{1j}, x_{2j}, \dots, x_{mj}), \quad j = \overline{1, k}.$$

2. Normalization of output data for matrix evaluation aimed at collation of every unit. Evaluation criteria (C_1, C_2, \dots, C_k) can utilize different units of measurement, therefore normalization is required for matrix evaluation.

$$x_{ij} = \frac{x_{ij}}{\sum_{p=1}^m x_{pj}}, \quad i = \overline{1, m} \quad (3)$$

3. After normalization of evaluation matrices (3.10) the output matrix can be viewed as follows:

$$R = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1k} \\ r_{21} & r_{22} & \dots & r_{2k} \\ \dots & \dots & \dots & \dots \\ r_{m1} & r_{m2} & \dots & r_{mk} \end{bmatrix} \quad (4)$$

4. Calculation of weight coefficients for each evaluation criterion utilizes the relevant entropy method that involves two steps:

4.1. Calculation of entropy value for each criterion (C_1, C_2, \dots, C_k) , that presents value e_j (entropy value for object j).

$$e_j = -\frac{1}{\ln m} \sum_{i=1}^m r_{ij} \ln r_{ij}, \quad j = \overline{1, k} \quad (5)$$

Value e_j varies over the range of 0 to 1.

4.2. Calculation of weight w_1, w_2, \dots, w_k for each evaluation criterion.

$$w_j = \frac{1 - e_j}{\sum_{i=1}^k (1 - e_i)}, \quad j = \overline{1, k} \quad (6)$$

Estimation of positive ideal solution (V^+) and negative ideal solution (V^-) for each evaluation criterion will allow to calculate productivity index for each evaluated subject.

$$V^+ = \left(\max_i (r_{i1}), \max_i (r_{i2}), \dots, \max_i (r_{ik}) \right) = (v_1^+, v_2^+, \dots, v_k^+) \quad (7)$$

$$V^- = \left(\min_i (r_{i1}), \min_i (r_{i2}), \dots, \min_i (r_{ik}) \right) = (v_1^-, v_2^-, \dots, v_k^-) \quad (8)$$

Calculation of each evaluated object distance from its positive ideal solution V^+ or its negative ideal solution V^- .

Based on formula (3.11) distance from A_i to V_i^+ and from A_i to V_i^- is calculated.

$$d_i^+ = \left[\sum_{j=1}^k w_j (v_j^+ - r_{ij})^2 \right]^{1/2}, \quad i = \overline{1, m}, \quad (8)$$

$$d_i^- = \left[\sum_{j=1}^k w_j (r_{ij} - v_j^-)^2 \right]^{1/2}, \quad i = \overline{1, m}, \quad (9)$$

Where d_i^+ – distance from i -th object evaluation to positive ideal solution;

d_i^- – distance i -th object evaluation to negative ideal solution.

Calculation of relative efficiency coefficient for ideal solution.

Coefficient is calculated for each object:

$$P_i = \frac{d_i^-}{d_i^+ + d_i^-}, i = \overline{1, m}, \quad (10)$$

Where P_i is the coefficient of relative efficiency.

Ranking of objects in accordance with relative efficiency coefficient value. In other words, the greater the value of P_i is, the closer the object is to ideal solution and the farther the object is from negative ideal solution.

We have made calculations utilizing the proposed technique for studied enterprises in 2007-2013, listed in table 1.

Table 1: Forming trade enterprises rating utilizing TOPSIS

№	Enterprise	2007		2008		2009		2010		2011		2012		2013	
		P_i	Place	P_i	Place	P_i	Place	P_i	Place	P_i	Place	P_i	Place	P_i	Place
1	Roma LLC	-	-	0,10 19	5	0,15 27	3	0,05 70	11	0,06 95	11	0,08 63	8	0,08 48	8
2	LuxPromExpo PJSC	0,31 01	2	0,19 73	3	0,18 20	2	0,25 45	2	0,32 08	2	-	-	-	-
3	Chernivtsi produkt PJSC	0,66 21	1	0,72 03	1	0,77 63	1	0,65 97	1	0,62 87	1	0,83 01	1	0,73 29	1
4	WUCCSvitnest	0,07 78	7	0,05 82	9	0,04 76	11	0,06 83	10	0,11 16	5	0,09 03	7	0,09 42	7
5	Defis LLC	0,15 56	3	0,20 35	2	0,09 10	5	0,15 80	4	0,17 22	4	0,11 75	3	0,12 55	3
6	Quasar LLC	0,09 79	4	0,05 54	10	0,04 95	10	0,07 40	8	0,09 41	9	0,10 93	4	0,10 97	4
7	Silpo-31 LLC	0,09 33	6	0,12 60	4	0,13 66	4	0,22 11	3	0,07 60	10	-	-	-	-
8	Olby-Roshen LLC	0,07 00	10	0,05 29	11	0,06 40	9	0,11 23	5	0,18 08	3	0,09 78	6	0,09 89	6
9	Technonaftozbut LLC	0,07 68	8	0,07 60	8	0,07 34	8	0,08 35	6	0,11 15	6	0,08 56	9	0,08 21	9
10	Universam LLC	0,09 41	5	0,09 03	6	0,07 43	7	0,07 70	7	0,10 39	7	0,09 80	5	0,10 02	5
11	Liga-prim LLC	0,07 57	9	0,08 09	7	0,07 68	6	0,06 98	9	0,09 85	8	0,12 26	2	0,23 76	2

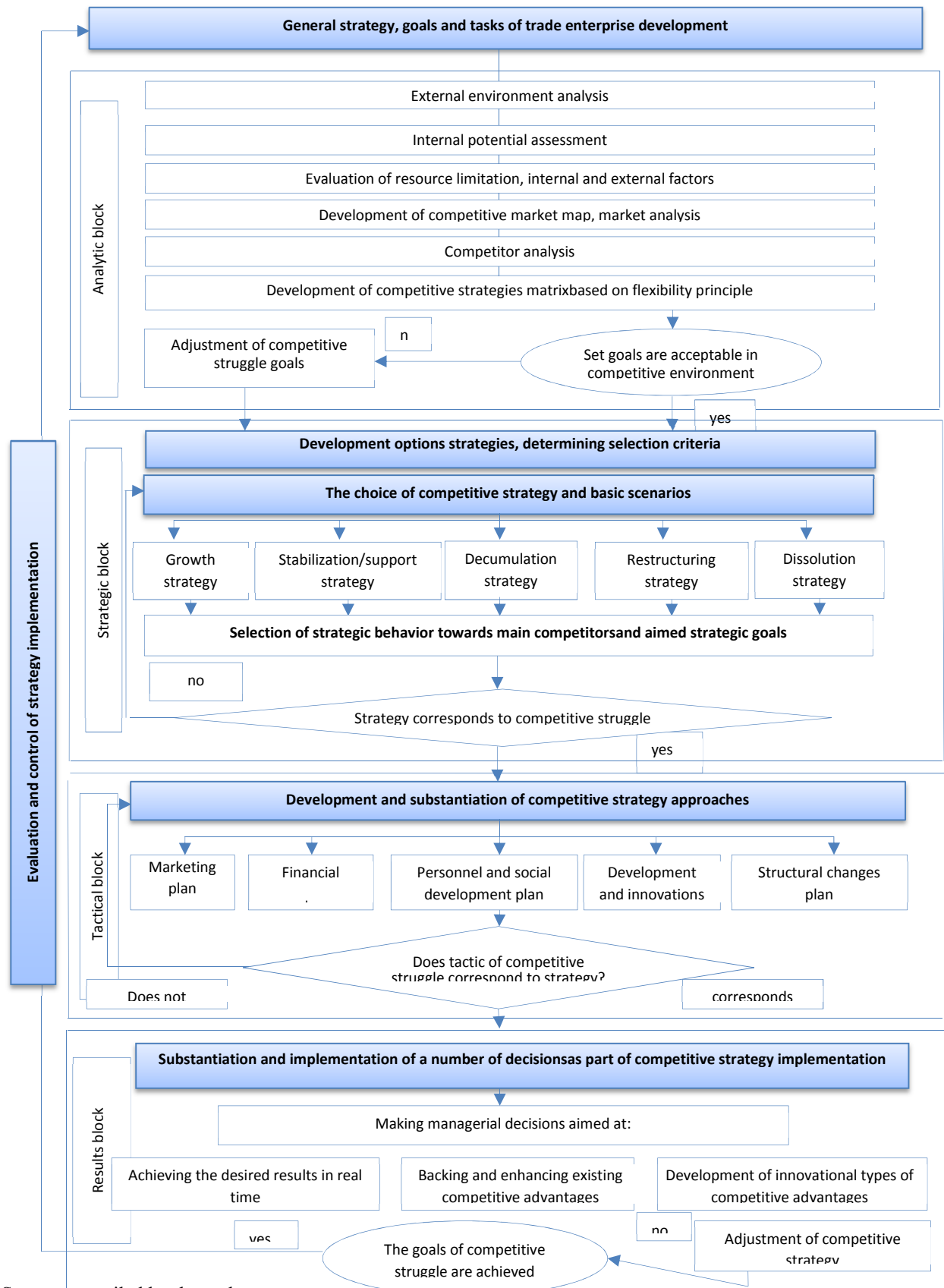
Source: compiled by the authors.

The results of evaluation and ranking of enterprises have shown that Technonaftozbut LLC is the leader in competitiveness among its peers. This can be attributed to monetary assets growth, decrease in borrowed stock in assets value and low rate of regular

expenses. Based on this technique we have concluded that the optimal trade enterprise for implementing innovative competitive advantages will be the enterprise that has its relevant efficiency coefficient closest to “ideal positive evaluation” – the highest value of innovative attractiveness, and the farthest from “ideal negative evaluation” in the parallel index.

After identification and evaluation of competitors, the enterprise needs to develop competitive strategies that can provide competitive advantages in future. In order to facilitate this, certain criteria must be met during selection of competitive strategy, such as: contextuality (the strategy must integrate particularities of a specific given situation into key factors of strategic success); consistency; degree of risk. Aside from that successful implementation of adopted business strategy depends on control system that exists during the term of active strategy. This is because control includes system analysis and decision-making evaluation in accordance with strategic plan and degree of strategic goals achievement. Process is not the only component of successful implementation of competitive strategies (fig.1). Unlike existing model of forming and implementation of strategy, the proposed model includes the array of criteria, based on which the strategy was selected and implemented. These criteria allow assessing the main characteristics of strategic development of the enterprise in question and presenting key limitations of strategy implementation process, as well as account for internal parameters of rational allocation of financial assets.

Figure 1: Sequence of forming and implementation of trade enterprise competitive strategies



Source: compiled by the authors.

The basis of stage-by-stage forming and implementation of trade enterprise competitive strategies is a complex of programmed actions (competitive strategy) and strategic decisions aimed at adapting to the changes in external environment. Instruments of strategic analysis and substantiation of efficient strategy development and implementation become more and more important. We fully agree with Kharynovych-Yavorska on the matter of absence of structured instrument system that would allow evaluating practical experience and usefulness of different strategy definition and implementation methods (Kharynovych-Yavorska, 2015).

Bearing in mind that prognostics is one of the ways of developing efficient management strategies, it would sound to conduct research based on economical and mathematical modeling, since this allows to study and assess the state and development dynamics of trade enterprise, define the role of each factor in development process and provide an opportunity forecast the future state of state enterprise in order to define its competitive strategy. The development of competitive strategy is based on evaluation of strategic indices which include gross and net income and the sum of assets and reserves. Each forecast of gross and net income annual average sum of assets and reserves can be calculated using different techniques, the selection of which depends on duration of forecasted period, means of communication and the experience in calculating target income. Aimed at analytic provision of forecasting of trade enterprises competitive strategies, we propose evaluation of external and internal factors by selecting an aggregate of variables in order to form competitive strategies, based on utilizing Neural Tools for MSExcel artificial neural network.

4. Conclusion

As the result, the finding suggested that increasing customer satisfaction and organizational efficiencies has become an organization ability to identify sources of sustainable competitive advantage. Thus, it is very important to understand customer needs in which help to develop customer loyalty, market share, and competitive advantages. In today competitive market, strategic planning is necessary in industries in which will strengthen firms' competitive position and help to sustain competitive advantages. Thus, analysing competitive position and leverage resources is a key determent of a firm's profitability. However, to sustain profitable growth and maintain a competitive advantage, firms will need to embrace consolidation and seek opportunities in new market.

Furthermore, maximizing customer satisfaction will maximize profitability and market share, while customer satisfaction is necessary to any successful business. Recently, TOPSIS method has been used widely in evaluating the financial performance.

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Influence of sanctions on the trends of labor potential development of employees on the Russian enterprises

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Abstract

Sanctions imposed by the Western countries and retaliatory sanctions from Russia in one way or another affect various aspects of companies' activities. According to a survey conducted by the Russian Union of Industrialists and Entrepreneurs, 48.1% of companies believe that economic sanctions have a negative impact on their activities. As Russian companies have to master quickly new technologies that replace foreign analogues, highly qualified personnel that can work with such technologies is in great demand. Innovative development requires urgent upgrading of skills of employees within their current competences or acquiring new skills necessary for goods production and rendering services with a high level of added value. Otherwise, it is impossible to achieve and maintain competitive positions. Therefore, workers who have several specialties at once and are capable of retraining are more in demand in the labor market today. We should also take into account the changing priorities of innovation activities of enterprises. In addition, the most competitive are those who are fluent in foreign languages and can use modern specialized computer programs on a professional level. Moreover, today such requirements are not only relevant for managers and specialists, but increasingly become a competitive advantage for workers.

Keywords: anti-Russian sanctions, import substitution, labor potential, embargo

JEL Classification: I25, O15, J010

1. Introduction

Development of modern society is characterized by transition to post-industrial phase and globalization of economic area. Nowadays no national economics is capable of being developed without participation in international manufacturing relations.

Economic interests of the Russian Federation represent a complex of relations between national and international economic entities. Within the frameworks of globalization, these interests are aimed at forming and developing a country's economy as a competitive body. Integration into international economy simplifies access to the world's scientific and technical achievements, opens new economic opportunities, including ensuring high living standards of population.

However, in recent times Russia has faced a complex of issues, of both objective economic and subjective political character [7]. The processes of development of international economy and exacerbation of the world's financial and economic crisis should be referred to the first group, whereas the adoption of anti-Russian and retaliatory sanctions should be referred to the second group. In these circumstances, the impact of mutual sanctions is of dual nature. On the one hand, their actions characterize the situation of uncertainty, negative trends of the country's economic conjuncture, exacerbate the existing problems of economy and create new ones. On the other hand, these sanctions promote the formation of opportunities as to the improvement of the economic situation within the country.

Today, the Russian economy lags behind the developed countries as to the level of its competitiveness. The problem of improvement of efficiency and boosting the competitiveness of the Russian enterprises is connected with the competitiveness of the manufacturing resources primarily, labor resources. It is particularly human potential that plays a crucial role as the main factor of economic growth. Therefore, increase in GDP almost by two thirds (64%) is determined by the participation of humans in manufacturing process [11]. Competency of employees, the level of development as to characteristics of their labor potential are the determining factors of success in the market, and today tasks of its formation and development are the centerpiece of the system of personnel management at enterprises.

2. Data and Methods

During the survey, the author used general logical methods of description, induction, analysis and synthesis, and also systemic approach. The results of scientific surveys on the issues of globalization appeared to form a theoretical and a methodological basis of this work. Articles and analytical materials from open sources served as the informational basis of the article.

3. Results and Discussion

Economic sanctions on the part of Western governments have negative impact on various shares of life-sustaining activities of enterprises. Apart from foreign sanctions, the economy is influenced by the Russian retaliatory sanctions. Almost half of the Russian companies (48,1%) confirmed the impact of these sanctions (to this or that extent) on their activities [10].

The sanctions impacted various sectors of the Russian economy – military sector, sector of raw materials, they also impacted airlines and financial sector. However, the sanctions had the strongest impact on oil and oil-refining industry. There is a lot of oil in the territory of the Russian Federation, but a vast majority of equipment for oil production and refining is being imported. At the time of imposing sanctions, import ratio in several industries was up to 80% [8]. The sanctions of the European Union and the USA are mainly aimed at prohibiting technology supply for the Russian arctic, shelf and shale projects. However, the consequences of such prohibitions affect other industries. It is no coincidence that 29.2% of entrepreneurs consider that impossibility to provide new equipment, technologies for their organizations due to restrictions on goods, works and services import is a negative result of imposition of the sanctions. When answering a question as to whether there are opportunities for import substitution in their industry, 60% of executives responded affirmatively, and more than half of them think that the imposed sanctions increase opportunities for import substitution [10].

The topic of import substitution emerged almost as soon as the sanctions were imposed but it's impossible to carry out reorganization and modernization of a production sector in one day. According to experts' calculations, replacement of foreign technologies with Russian prototypes will be possible in 2018-2020 at the earliest [8], however, another problem arises: who will install and use domestic technologies?

Import substitution is a multifaceted, difficult process from the perspective of practical implementation. Successful implementation depends on the solution of a number of problems, and one of the most important problem is provision of enterprises with qualified personnel capable of mastering modern technologies and using innovative materials. In the meantime, the necessity of production modernization, adoption of new technologies reveals the significant shortage of highly skilled labor force.

According to the survey findings of experts, who were the representatives of the Directors' corpus of the Russian Federation, topmanagers admitted lack of staff competence among major issues which could influence steady development of the economy under the conditions of sanctions, along with the absence of industrial policy (including import substitution), expensive loan resources, decrease of imported equipment and components [6]. The problem of shortage of competent labour force in the market as to a whole range of professions is especially acute.

The situation in the labor market has remained tense and unstable over the past few years (2014-2017), discussions about crisis in economy are held on an increasing scale, and, respectively, about crisis in the labor market. Major key figures characterizing the labor market do not undergo critical changes. The amount of employed population equals to 76.1 million persons, or to 52% of total amount of population of the country. The level of unemployment is 5.6 %, or 4.3 million of people [3]. At the same time, the trend of work supply and demand, according to quantitative rather than qualitative ratio, is being constantly changed. Along with that, overabundance of supply as to graduated economists, layers, humanities majors are still observed, but graduates from technical universities and working specializations are obviously deficient. More than half of job vacancies offered in the market relate to workers and engineers [14].

Discriminatory measures related to the imposed economic sanctions do not add much optimism to labor market. Reduction in investments and consumer demand, changes in foreign exchange market, shortage of funds for implementation of projects negatively affect the activities of certain enterprises and industries in general. The decline in manufacturing entails interruption of business, part-time employment, "forced and voluntary" unpaid leaves, transfers to other jobs, changes in operating modes without the consent of employees, wages cuts, and mass layoffs. Although the peak of job cuts has occurred at the end of 2015 – the beginning of 2016, and has been overcome by now, 19.6% of enterprises intend to downsize their workforce during the sanctions period, 17.4% are counting on the changes in staff policy, and 15.2% are going to cut "benefits packages" [10]. In addition, tendency as to the spread of mood of panic both among employees and employers is being more and more observed during such periods, which often leads to the increase in labor legislation violations [12, 5].

Fuel and energy enterprises, oil and gas enterprises, banking and credit organizations are normally among the most affected by staff reduction. These areas are more sensitive to changes in the economy, and therefore are the most vulnerable ones. Such vulnerability is caused by the fact that the Russian economy directly depends on the country's energy resources [13].

At the same time, the economic sanctions against Russia revealed a great need for the transition of the economy to the path of innovative development. Innovative processes require highly qualified, motivated, creative workers, who are capable of coming up with out-of-the-box solutions. Such employees make a unique competitive advantage, the most important asset of any organization that needs to be maintained and developed. The shortage of qualified personnel inevitably leads to the competition between enterprises for the most valuable staff. At the background of general stagnation and even wages cuts, such employees may count on much more attractive conditions, including those of the competitors.

That's why today many companies being in the conditions of the urgent need to reduce costs, including by optimizing the number of employees, adhere to the principle of retaining the most experienced and efficient employees, and reducing the number of redundant, low-skilled or "problematic" employees. The latter include workers with low labor productivity, low level of motivation, weak health, or those in need of frequent "personal days off" [9].

Today, Russia is rapidly developing its import substitution program. Prior to that, the demand on the market has been the highest for import specialists, now experts in manufacturing the same products within the country are in demand. Import substitution program is most actively implemented in manufacturing industry and agriculture. Large manufacturing companies, along with the government of the RF, heavily invest in re-equipment and modernization of enterprises. The shortage of personnel is particularly noticeable here. There is an acute shortage of workers: machine tool operators, toolmakers, tractor operators, welders [14]. Far back in 2014, the government obligated state corporations to work out long-term development programs for 5 to 10 years into the future. Within the framework of such programs, state companies must also ensure the development of their staff by creating a system of multi-level ongoing education.

The solution of import substitution problem directly relates to the issues of personnel training and professional development. Since Russian companies have to urgently master new technologies that replace the foreign ones, the need for highly qualified personnel providing such technologies has increased dramatically. Within the framework of innovative development, it is critical to increase employees' qualification level within their current professions or within mastering new ones necessary for the production of goods and services with a high level of added value [1]. If not, it is impossible to achieve and maintain competitive positions. Therefore, employees with several specialties capable of being retrained with due regard to the changes in the priorities of enterprises' innovative activities are in high demand in the labor market today. In addition to that, the employees that are fluent in foreign languages and are professional users of advanced specialized computer programs are the most competitive ones today. At that, nowadays such requirements refer not only to managers and specialists, but more and more often become a competitive advantage of representatives of trade workers.

However, first and foremost, it's the state that should take care of industrial personnel training, both that of workers and engineers. This implies the necessity for the dramatic increase in state investments in education and radical modernization of its technical facilities. The state can make state companies expand their training programs in an administrative way. The problem is that personnel training shall be performed at the same time with the introduction of new technologies. In case technology implementation pace is slower than that of the human resources training, the latter will be in no demand. However, first, companies shall get an understanding of what skills people lack in particular. In recent years, the labor market has faced a problem as to lack of competence in the field of industrial engineering and design solutions development, since domestic engineers were mainly engaged in servicing. However, the most important thing now is the lack of managers capable of creating competitive production [4]. Over the past 15 years, the country has developed a class of "growth managers". Now, we need to have crisis managers who know the technology thoroughly and are able to ensure high operational efficiency, and investments with a horizon of over 10 years are needed to create competitive industries.

4. Conclusion

Sanctions imposed by the European Union and the United States stimulate import substitution of foreign technologies and products with competitive domestic technologies and products in Russia. Import substitution program is gaining momentum. Despite the sanctions, the industrial production index in Russia was 101.1% [2] in 2016. According to forecasts, the positive trend will continue in 2017. And human factor, the level of competitiveness of workers at domestic enterprises, also plays an important role in solving this problem. Today, the personnel's competitiveness, being an integral characteristic of the workers' labor potential development,

is the most important competitive advantage of an enterprise, a crucial factor as to the growth of its competitiveness and innovative receptivity.

The relevance of this labor potential problem is indisputable. If we consider the aggregate potential of the economy, it is labor potential being the most mobile part thereof that plays the most important strategic role today - the function of development. The conformity of labor potential development level of workers to modern production requirements necessary for the implementation of goals and tasks of import substitution that Russian enterprises have at the moment is the main condition for the formation of competitive personnel.

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Personal requirements needed for entrepreneurship in Slovak Republic

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Abstract

Personal requirements such as skills abilities and knowledges are nowadays one of the most pertracted themes in the modern higher education. The theory is mostly based on the identification of this personal requirements needed for successful business and their incorporating into educational process. Paper deals with the problem based on the interview with the chosen sample of successful Slovak entrepreneurs. This research is a part of the scientific exchange and research realized through International Visegrad Fund project: Innovative Entrepreneurship education – necessary precondition for future prosperity of V4 region. The case of Slovak Republic is taken out from this research and is divided into four parts. At the beginning the personal motivation for being entrepreneur is described. Subsequently, personal abilities were examined followed by knowledges and skills needed for entrepreneurship. Finally the recommendations by examined entrepreneurs for university education were answered.

Keywords: entrepreneurship, abilities, skills, knowledges, education, Slovak Republic

JEL Classification: A29, I23, I29

1. Introduction

Entrepreneurship stimulates interest not only from the ruling elites, who see this phenomenon as an antidote to contemporary economic and social problems, but also from scientists whose approach to examining entrepreneurship is becoming increasingly sophisticated. Entrepreneurship also interests people seeking their own professional development as an alternative to salary-based employment and to exerting effort into accumulation of their employer's wealth (Staniewsky, 2016). All the benefits of entrepreneurship are the outcome of the work of the entrepreneur, who creates new enterprises, faces numerous risks and uncertainties on their way to success (Kuratko & Hodgetts, 2004). Knowledge is one of the most important predictors of entrepreneurial success. Sources of knowledge vary: for example, personal experience and formal/informal education (Makhbul, 2011).

Individual implementation of business activity in the Slovak Republic is possible since its inception in 1993. Despite the fact that the business activity in this territory has a rather extensive history, education in this area has begun systematically functioning, in particular after our entry into the European Union in 2004. Research in the field of education for entrepreneurship is in view of the above in the early days and its implementation was supported primarily by the resources of EU cohesion policy in the programming period 2007-2013.

2. Data and Methods

The objective of detailed interviews has been gaining answers from relevant respondents (Nevoralová, 2012) for the purpose of the research, and by this developing the knowledge of reality through their answers. This approach can be deliberated to the qualitative research methods (Bloor & Wood, 2006; Švaříček & Šedřová, 2007; Flick, 2009). Qualitative research was chosen as a means of exploring education to entrepreneurship in practice (Ragin

& Amoroso, 2001; Gavora, 2010) on a small number of representatives of the target group of successful business owners, who in contrast are capable to evaluate retrospectively the practical applicability of selected skills and abilities (Gray, 2010). For our purposes, we consider such successful entrepreneurs who employ at least one employee, and runs his/hers company more than two years. Graduating from higher education, the length of business experience, age or the profitability of the business activities carried out in our case for inclusion in the category of "a successful entrepreneur" were not relevant. Specific research questions have been formulated for the partial research survey:

- Which factors influence personal motivation for being an entrepreneur? And how they consider this factors as important for successful entrepreneurship?
- To what extent personality and selected abilities influence entrepreneurship?
- Which knowledge and skills are needed for entrepreneurship?

The questioners were only experienced inquirers, which have used this research method earlier. The environment for the interview was selected upon agreement with each respondent. The length of the interview was approximately 60 minutes. Archiving of the data was realised through written records taken during each interview with control and possible completion after the interview.

Two women and eight men of entrepreneurs took part in the research. The average age of respondents was 39.7 years, while their real age ranged from 29 to 60 years. On average, respondents had 9 years of business experience and nine employees. Five of them are graduates of colleges, six of them are doing business in the field, which they studied at the high school or college. Half of the asked businessmen's are doing foreign-trade activities in their practice. As regards to the sectors: five entrepreneurs are devoted to trade, four of them to the production (two at the same time trade and production), seven of them are providing the service.

3. Results and Discussion

The results of the carried out research can be summarized in few frameworks emanating from the above outline issues. Research progressed to the two key areas which were the prerequisites, skills and abilities for the success in business. At the beginning, attention was paid to the factors affecting the decision about starting a business and personal abilities to succeed in a business such as the skills, capabilities and knowledge that an entrepreneur mostly uses. In the second part devoted to education to business, we examined the opinion of entrepreneurs on the education system and their personal experience in this area. In addition to the strengths and weaknesses of education to business, which they attained themselves, they present also a proposals for the potential improvement for the universities in the future.

All entrepreneurs who have participated in our research equally present that the most important external factor influencing the motivation of an individual for the business is economic, and economic-legal environment in the country. In Slovak Republic, in their opinion, the economic and legal environment are set to the disadvantage of entrepreneurs, while negative factors considered in particular are: excessive bureaucracy in the communication with the State, the amount and the system of taxation and social security. Six of them consider the rules for the opening and continuation of the business in Slovak Republic as non-transparent, eight of them states that even the State is very little helpful. They agree that the rules in the field of business are set for the State, and not for the benefit of entrepreneurs, and as reported by one of them: "the State is my enemy in the business ". Two questioned entrepreneurs indicated that this attitude of the State was an important decision for them in the choice to move their businesses abroad.

3.1 *Personal motivation for being an entrepreneur*

As regards the individual backgrounds of entrepreneurs, we examined in particular the factors motivating them. All agree that the strongest motive for starting a business was for them the independence, and that they did not want to be employees. It should be noted that all had experience in the past with the role of the employee, even though three of them were only on the job during the study. They understand the independence predominantly as a synonym of freedom, whether in terms of freedom in making decisions about funding, or in the use of working time. For the greatest benefit of a business as opposed to employment they considered more funds available and more time flexibility, even though, paradoxically, to the detriment of the larger time, as well as the financial burden. Generally they consider a vision of a better and independent life as a powerful incentive for potential entrepreneurs.

Table 1: Personal motivation for being an entrepreneur

Answer	Number of answers
Freedom/independency/making things on its own	10
Self-realisation/to conduct something/to see, if he/she is able to achieve something	4
Realisation of own ideas	2
Income/money	8
Flexible working time	7
Inspiration from successful people	3
Unemployment/no other option	1
State support - projects for start-ups	1

Source: own research, 2016

Surprisingly, self-realization was not considered as one of the main motivators as well as inspiration from successful people or realization of own ideas. The least important motivator was stated state support and entrepreneurship as a better choice compared to be unemployed.

3.2 *Personality and abilities needed for entrepreneurship*

An important part of the research was carried out by the section focuses on the personal abilities, skills and knowledge essential for successful entrepreneurs. The most important features of the personality of the successful entrepreneurs were labelled as assertiveness and sense of purpose.

From the skills the ability of cooperation was chosen as the most important while they understand it as a part of communication skills, but as stated by one of them: „I need communication skills in my work so I can better cooperate".

More than half of the respondents also highlighted the ability to be a team leader, and agreed that it is equally important to be able to lead ourselves and therefore be "self-leader". As the other major personality abilities flexibility and stress resistance were mentioned. In different ways, successful entrepreneurs pointed out that in their work they must not be "gullible and naive".

Table 2: Personality and abilities needed for entrepreneurship

Answer	Number of answers
Communication (assertiveness)	10
Flexibility	4
Cooperation	10
Goal orientation (purposefulness)	10
Decision making	2
Proactivity	4
Risk affinity	5
Creativity	0
Responsibility	2
Time management	6
Delegation/confidence	0
Team –leader	6
Stress resistance	4
Ability to define tasks/processes	0
Ability to draw inspiration from good practices	1
Ability to find solution for every situation	2

Source: own research, 2016

Nobody stated the creativity, delegation and ability to define tasks as important for the successful career of entrepreneur. Not as much essential for success in business were considered also the ability to find solution for every situation, responsibility and decision making.

3.3 Knowledge and skills needed for entrepreneurship

From the skills and knowledge as the most important technical knowledge and skills associated with the area of business have been identified, because: "it is unacceptable that an entrepreneur in the field of technological skills rely exclusively on staff". All the entrepreneurs also said that in their work they use computer skills and other skills from the field of information and communication technologies on daily bases.

They acquired computer skills especially during the study (at the middle or high school). Five of the questioned entrepreneurs carry out their activities even beyond the borders of Slovak Republic. Three of them actively use English language in dealings with foreign partners, one of them uses German language. They all agree that the level of their language skills did not increase significantly at the collage and they use mainly knowledge acquired from the high school. Four out of five businessman's that do business abroad are graduates of collage. The fifth studied at the University, but did not finish these studies. All of them also agree that in their work they also use on a daily basis knowledge from entrepreneurship and financial literacy, which as they stated, they attained gradually through their work and not in school. Entrepreneurs also agree that they don't know "everything" and use in their practice variety services of a paid professionals, yet the basis of knowledge of all areas that affect their business (accounting, law, architecture ...) are considered essential.

Table 3: Knowledge and skills needed for entrepreneurship

Answer	Number of answers
IT knowledge	10
Overview of legislation	3
Negotiation skills	2
(Self-) Presentation skills	1
HR management and motivation of employees	3
Language skills (English)	3
Basic understanding/knowledge of processes in economy – legislation, market, strategy, planning, target groups	5
Technical skills from the field of business	10
Marketing	0
<i>Integration of knowledge from different fields</i>	4
<i>Basic outlook</i>	0
Managerial accounting	1

Source: own research, 2016

Half of surveyed entrepreneurs said they wanted to be successful businessmen before they began to study and have chosen field of study with regard to these plans. Those of them, who are graduates of secondary vocational schools reported that in the studies they have achieved in particular the technical and technological knowledge in the concerned field. College graduates list mostly computer and language skills. All seem to agree that their school did not prepare them for the business (or not sufficiently prepared), and that success in business owe their own tenacity and willingness to constantly learn.

4. Conclusion

The research was carried out on the sample of successful entrepreneurs chosen randomly from Slovak Republic. The questionery survey was realized in the form of personal interview with the respondents. The three main issues were examined: personal motivation for being and entrepreneur, personality and abilities needed for entrepreneurship and knowledge and skills needed for entrepreneurship. From suggested answers respondents had to choose the most important for them, respectively they could state their own opinion. All questioned entrepreneurs stated that the strongest motive for starting their own business was independence, because they did not want to be employees. From personality prerequisites for successful business career the communication, cooperation and goal orientation were chosen as the most important. Also IT knowledge and technical skills were considered as crucial in their everyday practical business. According to outcomes of other research computer skills can significantly improve worker productivity (Aral, Brynjolfsson, & Van Alstyne, 2012), help engender entrepreneurship and create new businesses (Fairlie, 2006) and they are valuable for creating and managing businesses (Gang Peng, 2017). It can be approved, that this outcomes are valid also for our sample because similar answers were stated by both genders and they also stated that IT knowledges and technical skills were significant in their start-up phase.

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Social Relations Networks of Tourism Microenterprises Operating on the Rural Areas. Case Study of Building Social Capital

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Abstract

In the modern world building social capital by enterprises is supported by new technologies, which eliminate the barriers of distance between the partners forming the relationship. However the basis for functioning of the microenterprises is still their relationship with their closest environment, which is usually the local community. This is particularly important in the tourism industry, especially in the case of agrotouristic companies. The specificity of this type of business requires building trust not limited to the relation: service provider - consumer, but also connected with building customer's confidence to the social space in which he resides. As a consequence, there is the need to maintain neighborly relations by the owners of tourism microenterprises. These types of companies are usually family businesses, often operating in the rural areas. For this reason, they are supported in various forms by extended family members who live in a close proximity. It can be assumed that such configuration of social relations facilitates building strong and sustainable social capital.

The authors of the paper present the results of pilot studies, which attempt to answer the question of the form of a network of relationships created around the tourism microenterprises. The research was conducted at the beginning of 2017, on the area of chosen rural villages of the Kraków-Częstochowa Upland.

Keywords: social capital, rural areas, rural community, tourism microenterprises, Kraków-Częstochowa Upland

JEL Classification: A13, O18, Z13

1. Introduction

The paper addresses the problem of building social networks in rural areas by families conducting business activity in the tourist industry. In Poland, this type of activity in rural communities in a free market environment is a relatively new phenomenon. The authors considered it important to examine how the development of tourism can influence the stability of social capital in the area of Kraków-Częstochowa Upland. The purpose of this article is to identify potential factors that may affect the development of social networks created by tourism micro-enterprises with tourists, neighbors, and their families. By undertaking research, no hypothesis was established. Using the open interview method, the main focus was on acquiring opinions and knowledge of respondents on their relationships. The use of qualitative research in which the authors have rejected the rigid framework for constructing research questions has allowed a deeper analysis of the problems that are relevant to the respondents treated as social experts.

2. Networks of social relationships in rural areas

A. Słocińska, characterizing organized forms of human activity, connects the logic of network and individualism with a performative approach in which people and their behaviors are more important for the functioning of collective entities than the structure and characteristics of an

organization itself (Słocińska, 2012, pp. 478-479). Key factors of the network are the nodes (Yunyun Yang & Gang Xie, 2015) defining its spatial structure. It is assumed that they consist of persons, social positions or actors, including collective actors. The second important aspect of network structure is the relationship between them, characterized by the flow of resources of three types: 1) material (physical objects); 2) symbols (including ideas, values, norms); 3) feelings like sympathy, approval or pleasure (Turner, 2004, p. 606). In the initial research on the network of interpersonal relations, J. Moreno concentrated primarily on emotional states, creating a technique of sociometry (Brzeziński 1984, p. 287). Material and symbolic resources can be regarded as a source of material and symbolic culture, while feelings as sociogenic resources. In the case of traditional villages, social networks were built mainly on the basis of material resources. This also involved family relationships. In Polish village, emotional relationships with children began to gain importance only in the twentieth century, and marriage was by then regarded as an economic institution, not a relationship based on feelings (Bukraba-Rylska 2013, pp. 139-154, Szlendak 2010, pp. 343-346).

Social capital is the important intangible factor in the market segment where small and medium-sized enterprises compete (Bylok, 2016). The network of social relations based on mutual trust and mutual obligations generates social capital (Stelmaszczyk, 2011, p. 24). Some authors point out that in network based organizations, trust is personalized and short-term (Bylok, 2014, p. 146). The consequence of the openness of the network may also be a decrease in trust. Nevertheless, A. Słocińska claims that people with machiavellian behavior (free riders) are rejected by the community (Słocińska, 2012, p. 477). It is worth pointing here to T. Yamagishi and K. Cook, who stress that the larger the network is, the lower the cost of such behavior is (Turner, 2004, p. 375). The exchange of contacts can be objectified and thus become autotelic. L. Molm, contemplating the issue of punishment in exchange processes, pursues an argument that actors will rather try to avoid losses. This means that in the exchange individuals will seek to maintain the status quo and not risk unduly risky behavior (Turner, 2004, pp. 386-389). It should be added that from the collective point of view, it is beneficial to spend resources to detect free riders, which is defined as altruistic punishment (Osiński, 2013, pp. 26-27). The traditional rural community was generally a small community in terms of population. For this reason, it was characterized by community social control and relatively restrictive observance of rules, even if they were not economically justified (Bukraba-Rylska, 2013, pp. 170-175). It can be assumed that with the opening of the rural community to external cultural influences, the scope of the network of relationships increases and thus weakens the sanctioning of actions incompatible with the adopted rules.

Each new entrant is a potential competitor in accessing resources. According to R. Emerson, network tensions are not so large in result of the frequency of relationships between heterogeneous actors, but in result of their asymmetry in terms of: 1) power and 2) access to resources. Such case of asymmetry of a relationship is a monopoly, which occurs when actors having one kind of goods become alternatives to an actor having another kind of goods. In the same way, one actor has an advantage over another. Such a system is unstable and it is assumed that the actors exchanging resources with the monopolist will seek to balance the position. One way of balancing is by division of labor, where actors exchanging monopolies start to diversify in terms of the resources they supply (Turner, 2004, pp. 328-330). Such diversification in access to resources in rural areas occurs only when some people start to engage in non-agricultural activities or specialization in farming occurs. In the case of Polish countryside, heterogenization and commodification, which was accompanied by integration with supra-local markets, began in the second half of the nineteenth century, but their intensification took place only in the interwar period (Turowski, 1995, pp.103-112).

If there is a stable core in the network, then each new entrant is treated in the same way and its different values may be a potential resource of social capital. For people just entering the community, the relationships they create in the network can appear as full of tensions and confusion. Network tensions and negative emotions can be reduced if acts of exchange will be reciprocated and, to a small extent, will lead to structural superiority of one actor over another, while positively influencing their mutual dependence. Such a network model would be considered to be stable and therefore, at low degree of vulnerability and disintegration. Traditional village, with its axio-normative system regulating family membership was a stable social structure. Responses to mutual actions, such as the corvee (pol. *odrobek*) institution, were also strictly regulated (Bukraba-Rylska, 2013, 456-457). It can be questioned whether the establishment of a rural tourism business, ie the establishment of supra-local relationships with clients, leads to destabilization of the relationship network and whether shaping new social relationships stabilizes the new form of the network. It would be worth to investigate the time it takes to stabilize a new form of social network depending on the number of entities conducting such activities in tourist regions. The shortages of social and economic capital in rural areas with tourist values may change the way of life to a large extent and lead to changes in the way we meet our needs (Zhanfeng Guoa & Li Sun, 2016).

3. Methods

Despite the popularity of social capital, there is a lack of research on the contribution of social capital to micro-enterprises in rural areas. However, the role of micro-enterprises in the creation of social capital in the context of economic deprivation is emphasised (Friedman J.J., 2001). Thus, the choice of microenterprises as research subjects has determined their specificity, manifesting themselves in the creation of supra-local networks of social relations. Conducting research, the authors conducted reconnaissance using a free interview described as a qualitative field interview (Babbie, 2004, pp. 327-330). Its purpose was to obtain information that would allow the formulation of research hypotheses. Unlike the survey interview, the open unstructured interview provides a coherent description of the social world (Silverman, 2009, pp. 74-79). Thanks to the narrations (obtained) from the interviews, it was possible to determine the relationships of the investigated subjects to other members of the community with whom they interact and create social bonds.

Case study allows for a comprehensive knowledge of the phenomenon. Some methodologists recognize that this is a method reserved for the study of unique phenomena, and its purpose is not to verify the accepted theoretical assumptions. Literary autotelic and instrumental case studies (Stake, pp. 625-637) are distinguished. The authors of this paper assume that the initial stage of the study will be in the form of an instrumental case study. The consequence of this was the decision to choose the subjects of study. In qualitative research, the process of selecting the next respondents is iterative. With the acquisition of empirical material, researchers gain the knowledge and experience to reach the most knowledgeable and diverse viewpoints (Flick, 2012, pp. 62-63).

As a sampling frame, an address list was created based on available databases of tourist companies in the western part of Kraków-Częstochowa Upland. On the basis of it the places where the majority of tourist companies operated were chosen. The next step was the selection of 4 places where the research was decided to be done. Then 10 respondents were selected who managed or co-managed tourism microenterprises, who agreed to participate in the interview. In order to obtain the natural form of narration, it was proposed to conduct a conversation in the place where they carried out their tourist businesses. Such an arrangement of the place of interaction makes it possible to observe some practices related to their activity (Flick, 2012, pp.

63-64). The study was conducted between January and March 2017. Interviews were conducted with people conducting tourism activities in 4 communes of the districts of Częstochowa and Myszków: 1 interview was conducted in Ponik (commune of Janów) and 3 interviews in Olsztyn (commune of Olsztyn), Żarki (commune of Żarki), Żarki-Letnisko (commune Poraj). It should be noted that unlike the other places, Żarki is a town, although in the second half of the 19th century, after the January Uprising, it lost city rights for nearly a century. At the same time Olsztyn also lost city rights, but they did not recover them later. It was assumed that the formal status of the village had little influence on the character of the social relations between the inhabitants.

The adopted research strategy proved to be beneficial. Thanks to the iterative process of conducting research, in which respondents were treated as social experts, in the subsequent discussions, the scope of questions was broadened, which was relevant to the respondents themselves. According to the concept of humanistic factor, the researcher should treat as significant what is important for the subject, because subjective judgments of reality have objective consequences for their functioning.

Open interviews were divided into three subject areas: 1) network of relationships among family members and professionalisation of business activity; 2) the network of relations between micro touristic enterprises with the neighborhood and the building of social capital in the local community; 3) building a network of micro-enterprises relations with customers, ie tourists. As a result of the pilot studies, it was also decided to expand the interviews with questions covering the following issues: building relationships with municipalities and building institutional capital, and active marketing activities of the surveyed entities, to be used to analyze the content of their websites.

4. Results and Discussion

4.1. Family relations in micro tourism enterprises

Investigated companies differed in the context of family relationships primarily with regard to professionalisation of activities. In those companies where owners professionally approached to conducting business, there was a clear division of labor, characterized by less flexibility in the exchange of social roles connected with serving the tourists. This flexibility was noticeably influenced by the professional situation of individual family members. Among families in which their members work professionally and tourism is treated as an additional source of income, the division of responsibilities is stricter. In most cases interviews were conducted with owners or co-owners having school or student children. Although it was assumed that the next generation would be the successors of the business-related tourism business, respondents were not usually in the process of making a binding decision.

Taking into account the decisions to start a tourist business, they were based rather on a number of different circumstances than resulting from the self-employed business plan. These circumstances included: encouraging third parties to consider launching an accommodation offer; unfavorable economic situation or vice versa – having too large cubature of house to meet the needs of the family or the needs to invest in accumulated savings. Families where the division of responsibilities was more pronounced, had a stronger hierarchy. As a result, a large part of the decision was made in person. In each of the surveyed companies strategic decisions were, however, made jointly by family members involved in tourism activities.

4.2. Socio-forming functions of micro tourism enterprises in the local community

The intra-family relationships in the studied enterprises were varied, mainly in terms of interchangeability of roles. These differences were not as great as in the case of relations with neighbors living in the place of business. The study found that there was a wide spectrum of emotional ties with neighbors – from close, spontaneous social relationships to feelings of alienation. The analysis of respondents' responses indicates that their attitude towards the neighborhood was due to several factors: 1) the degree of attachment to the place and time of residence; 2) degree of professionalisation of business activity and professional activity; 3) previous experiences in neighborhood relations. In one of the places (in Żarki), the respondents pointed to the tightening of their neighborhood bonds since the start of their activity, especially for those who have also started tourist business. Unlike other places, accommodation in Żarki is built for 5 years only. In other places, which for decades have the character of a tourist village, no changes in such relationships have been perceived.

Researchers undertake various types of cooperation within the scope of their business activity. They exchanged such forms of cooperation as: 1) mutual sharing of staff providing tourist services; 2) mutual recommendation in case of lack of accommodation; 3) recommending food services in the direct neighbourhood; 4) recommend different types of attractions organized by friendly neighbors. Recommendations as a type of cooperation is probably specific for this business, because stimulating knowledge sharing behavior faces many socio-psychological and organizational barriers in organizations (Słocińska 2016). Respondents had no difficulty describing neighborhood relations regarding business co-operation. It was difficult, however, to determine what the attitude of the neighbors to the tourists was. Frequent reaction was to say that there were no conflict situations ("there were no incidents", co-owner of the business from Żarki-Letnisko). This may indicate that people conducting such activities are afraid of circumstances that could discourage tourists from visiting their locality. On the one hand, it would indicate the weak social capital, built on the basis of a network of relations created by both neighbors and tourists. On the other hand, this may be the result of a continuing system of values characteristic for rural communities, where a non-agricultural occupations were condemned (Bukraba-Rylska, 2013, pp. 442-443). It can be assumed that the shorter the tourist activity is in a given locality, the more likely it is to meet the lack of acceptance as a cultural innovation. Thus, it may lead to a stronger integration of "minorities" conducting such activities.

4.3. Creation of a network of social relations between micro-tourism enterprises and their customers

In the interviews with respondents, it was noted that the level of empathy of those who run the tourist business can be significantly influenced by the relationship with tourists. Some of them, when describing their attitude to tourists, revealed warm attitudes ("the atmosphere is like in a family", co-owner of the business in Żarki), for some respondents it was important to isolate from guests and avoid closer relations ("one should avoid feasts [with tourists]", co-owner of the business in Olsztyn). In both cases, the approach to customers was based on the idea of a tourist and his/her needs. The last category of respondents stated that they are trying to recognize the needs of their guests and, on that basis, modify their behavior and their distance. It can be assumed that in the latter case the respondents show a higher level of empathy.

In the firms where tourists were treated familiarly, the clients (in the opinion of the respondents) were often the initiators of creating closer relationships, inviting the hosts to share the feasts, or leisure trips, etc. The imagery of the proper relations with the tourists also influences the arrangement of the space shared with them. The tendency for joining or separation also involved

activities aimed at providing tourists with the comfort of privacy or creating places where they could integrate. Such creation is both the construction of suitable premises, such as the common kitchen, and the creation of them ad hoc outdoor, for example by setting tables with umbrellas in the yard. Less or more empathic approach to tourists also coincided with consideration or not taking into account the tourists' needs of affiliation. In the case of several surveyed firms, respondents stated that attention should be paid to "matching tourists". They argued that one should not accept different types of tourists at the same time. According to them seasonal workers, families with children, groups of friends and "romantic couples" have different needs in terms of integration with people from neighboring rooms.

5. Conclusions

The key parts of the network are the nodes through which three types of goods flow: material, symbolic and emotional ones. The authors concluded that the nodes of the network for microenterprises are the most decisive persons, ie the ones that are the main organizers of the company's activities. It was them, during the interviews, who set themselves or were assigned by other family members as competent to interview. Because the nature of the surveyed companies is activity in the services sector, this is related to the flow of intangible assets, not taking into account financial issues. Establishing a network of relationships through the flow of material goods was noticed in the case of neighborhood relations, eg using locally produced food products. Relations with family and tourists were emphasized primarily by emotional relationships. The lack of references to symbols-based relationships may, however, result from the structure of the research tool. There were no questions about values and symbols in interviews, and respondents who were asked about relationships with family, neighbors and tourists focused mainly on emotional aspects. It seems that references to the sphere of symbols could arise if they were caused by relevant questions. Based on the research conducted, it is impossible to determine whether cultural capital or social capital is more important for building a network of relations with tourists.

Tourism activities in rural areas largely deviate from the rules of the value system, which in the traditional village was based mainly on material values. It would be difficult to determine to what extent the formation of new networks of relationships in tourist villages is stabilized. Respondents' responses may indicate an anticipation of a deterioration of relations with tourists in the event of unexpected incidents. At the same time, the surveyees assumed that tourism development would benefit the whole local community and more people would participate in the exchange of goods.

Building social capital and its relative stability depend on the length of time that individuals have the opportunity to establish exchange relationships. This is observed in the studied villages. In Żarki, where a tourist base has only recently been created, respondents were more concerned about their success in running a business, despite their large investments in the development of small town space. In Żarki-Letnisko, however, the tourist character of the village is reconstructed and it is noticeable that the inhabitants perceive large social and cultural capital for conducting tourist business. There is a relatively stable social capital, despite the partial degradation of the spatial tissue of the village in the form of a large number of abandoned and ruined houses. On the other hand, in Olsztyn, only the respondent, who has been doing business in the village for a while being professionally engaged in promoting tourism, was able to address the issue of the neighborhood network critically in the context of business tourism. For the other two respondents who saw themselves as rooted in the local community, the issue of neighborhood bonds was not problematic. In the area of the village there is a clear continuity in running this type of activity.

In this paper, a description of changes in social relations occurring under the influence of the development of tourism in rural areas has only been outlined. On one hand, conducted interviews, have allowed us to identify a large variety of attitudes toward creating relationships with neighbors and tourists and, on the other, to identify potential factors that may have an impact on the building of social capital in the rural community.

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Knowledge Sharing and Life Satisfaction of Employees: Intervening role of Organizational Rewards

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Abstract

The success of knowledge intensive firms is dependent on knowledge management practices in the firm. A better knowledge management system comprises feasible strategies to identify, react and overcome problems inherited in knowledge resources. Employees of knowledge intensive firms are considered the prime resource in terms of knowledge creation, accumulation, sharing and protection. This research examines the impact of knowledge sharing intentions on the life satisfaction of employees working in knowledge intensive firms in Sri Lanka. A questionnaire was used to collect data from employees who are working in IT oriented firms in Sri Lanka. Respondents from different job categories and companies for the sample were selected using a stratified sampling method. Descriptive and correlation analysis of the respondents and responses were done to identify basic features of the sample. Study findings indicated that knowledge sharing in the profession by employees of knowledge intensive firms has strong positive influence on their life satisfaction. Further, the analysis confirmed that organizational rewards mediate the relationship of knowledge sharing and life satisfaction. Findings of the study have contributed immensely to both theory and practice.

Keywords: ICT industry, knowledge management, Knowledge sharing, life satisfaction, organisational rewards, Sri Lanka.

JEL Classification: M10

1. Introduction

Spillover hypothesis proposes a corresponding influence on experiences in different domains of life (Judge, Parker, Colbert, Heller, & Liles, 2001). Experiences gained from one domain of life might be the result of activities that took place in the other domain. Life satisfaction which is mostly interchanged by well-being, happiness and subjective well-being is identified as the prime requirement of the human's general life domain. Eid and Larsen (2008) define life satisfaction as frequent satisfaction and joy in life than dissatisfaction and sadness. Scholars have shown a great enthusiasm to explore this concept on an individual basis as life satisfaction consists of unique features. Each individual has their own conclusion about well-being of their lives and individual's subjective and self-reported opinions are oriented on their personalities. However, scientists in well-being studies have commonly agreed that life satisfaction of individuals can be measured subjectively without harming any aspect of individual preferences (Frey & Stutzer, 2001). Some scholars have identified life satisfaction as major component of overall quality of individual's life (Cheung & Lucas, 2014). Exploring the antecedents of life satisfaction, Moksnes and Espnes (2013) identified psychological well-being as an antecedent which is influenced positively by life satisfaction. Physical health (Zullig et al., 2006) and personal achievement in life like career development and marriage (Diener & Chan, 2011) have also shown positive influence on life satisfaction.

Another life domain which is frequently addressed by scholars is the job or profession of a person. A job of a person is critical to one's life satisfaction (Sirgy et al., 2001). Further, it is found that a person's level of satisfaction in the job has direct influence on his or her life satisfaction (Erdogan et al., 2012). However, the literature of life satisfaction of working people has not adequately explained what factors of the work domain influences the general life satisfaction of working people. Instead, previous scholars have discussed life satisfaction in case of individual and personal characteristics (Kapıkıran, 2013; Erdogan et al., 2012), economic aspects (Boyce et al., 2010), social aspects (Kapıkıran, 2013), and cultural aspects (Diener et al. 2003).

As far as an individual in organizational level is concerned, the status of the job has been shown to be linked to the status of life. For an example, one's achievement in the career has shown a direct relation to life satisfaction (Judge et al., 2010; Wright et al., 2009). Performance in the job (Wright & Cropanzano, 2000), remuneration from the job (Haring, Stock, & Okun, 1984) and job attainment (Judge, Klinger, & Simon, 2010) have been already explored in case of life satisfaction. Also, work-life balance, job satisfaction and life satisfaction of individuals have been conceptualized by previous researchers (Judge and Watanabe 1993; Bowling et al. 2010). Although these studies have enhanced the body of knowledge on the domain of the job, many other aspects in the case of life satisfaction remains underexplored (Suh et al., 1998). The literature on life satisfaction is still not able to provide comprehensive elaborations on certain important aspects related to the job domain (Erdogan et al., 2012). Nevertheless, knowledge sharing which is identified as prime requirement of gaining competitive advantages for firms has not adequately been explored in relation to life satisfaction of individual employees. The lack of understanding about critical concepts like employee's knowledge sharing of their work domain has limited the development of the knowledge base of life satisfaction (Bowling et al., 2010). Available limited research studies (Zhou & Xiaowen, 2016; Shaker, Donald & Bárbara, 2007) have also provided inconsistent conclusions. Accordingly, this research examines the knowledge sharing behaviour of employees on their life satisfaction focusing to advance the knowledge about the quality of life of employees. Investigating self-reported knowledge sharing on life satisfaction and exploring the intervening aspect on the relationship between knowledge sharing and life satisfaction in knowledge-based industries serve as specific objectives. These specific objectives would ultimately contribute to literature in enhancing the understanding of antecedents of work status on life satisfaction of employees. The remainder of this paper with literature review, research methodology, data analysis and discussion and conclusion would confirm the achievement of the above objectives.

2. Literature Review

The literature review of this study focuses on developing a brief argument in case of life satisfaction of working personalities. Accordingly, the argument, 'life satisfaction of working people is determined mainly by their profession and in this case knowledge sharing and organizational rewards play a major role in making their life satisfied' is developed. In order to develop this argument the concepts of employee's knowledge sharing and organizational rewards in a firm is discussed briefly.

2.1 Knowledge sharing

The social exchange theory (Emerson, 1976) also explains that human relationships are solely based on the cost and the benefit of association. The same association might be seen in the employee and employer (organization) relationship in the business world. When employees are satisfied about what is offered from the organization as rewards, such employees also try to contribute to the firm in return. Then the organization also treats employees by offering more

rewards. This mutual relationship is not only limited to the job domain of the employee. It would experience positively or negatively matters related life domain other than the job such as life satisfaction (Zhou & Xiaowen, 2016). In addition to theories, scholars of this field believe that organization and employee relationship is dependent on the organizational culture which is developed on individual experience, psychological assumptions, beliefs, norms and behaviours (Aycan, 2000). As a result, life satisfaction is also dependent on what an employee does in the job. Specifically, volunteer activities in the job like knowledge sharing make an employee happy in their life in general (Shaker, Donald & Bárbara, 2007). However, this exchange relationship between organization and employees is obvious in case of knowledge sharing in an organization. Accordingly, the first hypothesis of the study is set as below.

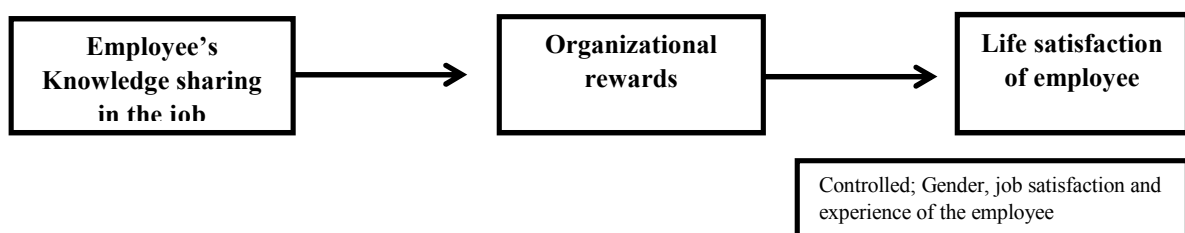
H₀: Knowledge sharing of employees in the job positively related to life satisfaction.

2.2 Organizational rewards

Organizational rewards refer to all the benefits that an employee receives from his or her organization. Katz and Van Maanen (1977) identified three distinct types of rewards as task, social and organizational. In this categorization, task rewards are intrinsic in nature and social and organizational rewards were identified as extrinsic rewards. However, employee's persuasion about rewards stick to the intrinsic, extrinsic and social (Williamson et al., 2009). Intrinsic rewards are intangible benefits emerging from the job of the employee. Extrinsic rewards such as salaries, promotions and welfare facilities are more visible and common benefits which an employee is offered from the organization. Social rewards originate from the network of individuals and teams of a firm. These benefits of an employee are derived from interpersonal relationships with colleagues, subordinates and superiors are called as social rewards (Williamson et al., 2009). Literature of human resource management is clear that employee's knowledge sharing in the firm leads to organizational rewards (Kathryn & Abhishek, 2016). At the same time, the relationship between organization rewards and life satisfaction has also been established (Berhad, Izwan & Baharom, 2013). Accordingly, the second hypothesis of the study is established as below.

H₀: Organizational rewards mediate the relationship between knowledge sharing and life satisfaction

Figure 1: Conceptual Framework



Source: Author's impression

3. Methodology of the Study

The data for this study intends to adapt primary data from employees who are working in Knowledge-based industry (Information, Communication and Technology) in Sri Lanka. National ICT Survey – 2013, revealed that current workforce of ICT industry is approximately 75,000 employees. The survey further reported 63% of the workforce is having either Bachelors

or Master's Degree as educational qualifications. The industrial revenue in exports in 2016 is reported as USD one billion and USD five billion with workforce of 200,000 projected for year 2022.

Adapting to survey methods, a questionnaire was constructed to collect data from employees who are employed as Software Development Engineers in the ICT industry. A sample of 126 respondents who were represented by 13 software development and related services providing companies were finally selected as respondents while a few questionnaires were rejected due to inadequacy of information. Convenient sampling technique was engineered to select respondents. Respondents as executives were attached to Departments of Database Administration & Development, Systems & Network Administration, Web Development & Programming and Software Engineering. All the questions in the questionnaire were related to knowledge sharing, organizational rewards, job satisfaction and life satisfaction and the variables were in a seven point Likert Scale from strongly disagree to strongly agree. Accordingly, measurements for variables such as life satisfaction with five items (Diener et al., 1985), knowledge sharing with five items (Brock et al., 2005), organizational rewards with two items (Brock et al., 2005) and job satisfaction (control variable) with six items (Schriesheim & Tsui's, 1980) were adapted and used in the questionnaire (refer annexure 1 for more details).

As shown in the figure 01, employee's knowledge sharing serves as the predictor while life satisfaction is the outcome variable. Organizational rewards are play the intervening role between knowledge sharing and life satisfaction. Job satisfaction and age the employee are controlled in the model. Descriptive statistics and hierarchical regression or step-wise regression in SPSS software facilitated the analysis.

4. Data Analysis and Discussion

Table 1 shows descriptive information about respondents and firms of the sample. The average number of employees working in firms is reported as 91 (SD = 31). All firms in the sample were mostly medium in size. The average age of all firms in the sample is around 23 years (SD=11) indicating appropriateness of selection of sample to represent suitable respondents. Male population represented around 63 percent while mean experience and age of employees respectively indicates 7.2 years (SD=5.8) and 29 years (SD=8).

Table 1: Descriptive information of Respondents

	Minimum	Maximum	Mean	Std. Deviation
Size of the firm (employees)	29.00	123.00	91.11	31.01
Age of the firm (years)	10.00	40.00	23.05	10.92
Gender	1	2	1.37	0.48
Employee's experience (years)	1	25	7.20	5.77
Employee's age (years)	19	50	29.36	7.64

Source: Author's calculations

Means, Standard Deviations and Coefficient of Correlation of variables of this study are given by Table 2. Figures in that table and Variance Inflation Factors confirm that the multicollinearity among the study variables is not such an issue as most figures have not crossed the limit of the risk of multicollinearity (Romme et al., 2013). However, the first hypothesis of the study is supported by the results given in this table. A positive correlation ($r = 0.553$, $p < 0.01$) is reported

between knowledge sharing and life satisfaction. Other than that, organizational rewards correlate strongly with life satisfaction ($r = 0.744$, $p < 0.01$) and knowledge sharing as well ($r = 0.736$, $p < 0.01$).

Table 2: Means, Standard Deviations and Coefficient of Correlation

	Mean	SD	1	2	3	4	5
1. Gender	1.37	0.48					
2. Employee's experience	7.20	5.77	-.089				
3. Knowledge sharing	5.61	0.96	-.024	.744**			
4. Life satisfaction	5.82	0.64	.026	.456**	.553**		
5. Organizational rewards	5.81	0.66	.057	.619**	.736**	.744**	
6. Job satisfaction	5.09	0.80	.112	.283**	.391**	.247**	.395**

Source: Author's calculations

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Table 3 presents the results of hierarchical regression. This table serves to test the second hypothesis of this study. Results of hierarchical or step-wise regression in this study are used to test the second hypothesis in the same process recommended by Baron and Kenny's (1986). They have recommended four conditions or pre-requisites to confirm the mediation effect of a variable between two other variables. The existence of the relationship between independent and dependent variables, independent and mediate variables, mediate and dependent variables and when the mediate variable is added to the model, the relation between independent and dependent variable become non-existence and weaken. In that case, if the independent and dependent variable become nonexistence, it is identified as full mediation while if relation becomes weaken, it is identified as partial mediation.

Table 3: Results of Hierarchical Regression

Variables	Organizational rewards			Life satisfaction					
	Model 1			Model 2			Model 3		
	β	t	Sig.	β	t	Sig.	β	t	Sig.
Gender	.073	1.203	.231	.043	.566	.572	-.012	-.186	.853
Employee's experience	.172	1.925	.057	.106	.938	.350	-.024	-.256	.798
Job satisfaction	.117	1.792	.076	.031	.377	.707	-.057	-.846	.400
Knowledge sharing	.564	6.073	.000	.463	3.937	.000	.037	.344	.732
Organizational rewards							.755	8.131	.000
R²	.057		.000	.314		.000	.557		.000

Overall F	40.44	.000	13.81	.000	30.22	.000
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Source: Author's calculations

Regression results of table 3 are consistent with Baron and Kenny's (1986) first condition of mediation effect. Model 2 data which is the results of life satisfaction regressed over knowledge sharing indicate that knowledge sharing is positively influenced by life satisfaction ($\beta = 0.463$, $p < 0.05$). When the second condition is concerned, model 1 data shows that mediate variable, organizational rewards are influenced positively to independent variable, knowledge sharing ($\beta = 0.564$, $p < 0.05$). At the same time, model 3 data which is results of life satisfaction regressed over organizational rewards shows that organizational rewards are positively influenced by life satisfaction ($\beta = 0.755$, $p < 0.05$). At the confirmation of all these first three conditions of mediation effect, the last condition was tested. Model 3 data which shows results of life satisfaction regressed over knowledge sharing when mediation variable is added to the model confirms full mediation effect. Because when the mediate variable is added life satisfaction over knowledge sharing becomes insignificant ($p > 0.05 = 0.732$). Accordingly, the second hypothesis of the study satisfies the conclusion that organizational rewards fully mediate the relationship of knowledge sharing and life satisfaction of employees in knowledge intensive firms.

The contribution of this article can be divided into manifold benefits. This study is among several other studies which explore the behaviour of employees in case of their general life domain. This study is one of the initial research studies which attempted to combine employee's job and life domains together. In one way, this brings uniqueness to the study as employees working in knowledge intensive firms are highly attached to their jobs. In another way, their job performance is highly related to life satisfaction as well. However, a positive strong influence between knowledge sharing in the job and general well-being of employees working in knowledge intensive firms was identified. This finding clearly signals that life satisfaction of employees is really related to activities that take place in the job. In addition, identification of full mediation effect by organizational rewards in the relationship between knowledge sharing and life satisfaction is a new concept for theory and practice. Theoretically, the intervening role of organizational rewards in the case of life satisfaction of employees could be established by this study and thereby advancing the knowledge of the well-being of employees. Practically, the value of organizational rewards as an intervening factor in case of general well-being of employees could signify several other actions by the management of a firm that leads to the enhancement of the quality of life of employees.

5. Conclusion

This research focused to study the knowledge sharing behaviour of employees on their life satisfaction aiming to advance the knowledge about the quality of life of employees. Findings of this study confirmed a strong positive influence brought by knowledge sharing of employees in their profession in relation to their general life satisfaction. Further, the intervening role of organisational rewards as a mediating factor in the relationship between knowledge sharing and life satisfaction of employees was evidenced. Organisational rewards as a variable has shown a full mediation effect than a partial mediation. These findings have contributed newly to the theory as well the practice.

Findings of this study underscore several important implications for practice. The role of managers and employees of knowledge intensive firms in case of life satisfaction is clearly defined by the study. In one way, managers can promote life satisfaction of employees through knowledge sharing and organizational rewards. As a result, as exchange theory explains, the

firm would get the maximum output from their employees by making employees happy in their life domain in addition to their job domain. The other way, employees themselves can be happy in their general life by sharing the knowledge in their profession. Policy makers also can develop policies based on knowledge sharing and organizational rewards to enhance the quality of life of employees. But some concepts have made the study findings limited.

Findings of this study would be interested carefully with study limitations. First, study conceptualization comprises only of one independent, intervening and three control variables to interpret the life satisfaction of employees. Practically, more factors could probably involve in determining the life satisfaction of working people. Second, the results represent only a sample of respondents in knowledge intensive firms. Number of respondents, firms, geographical area and time period of the survey may be reflected by the results rather than the whole population of knowledge intensive firms. Finally, confining a broad concept like life satisfaction to a few questions would not reflect the real life satisfaction of working people in general. Specifically, employees who represent in different societal levels, standards and status would not be possible to put into one basket. Future researchers can focus on eliminate one or several limitations to carry out their study about life satisfaction of working people.

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Annexure 1. Validated measurements of variables used in the questionnaire

Constructs	Measurement Item
<i>Knowledge Sharing</i>	<p>I will share my work reports and official documents with my organizational members more frequently in the future.</p> <p>I will always share my manuals, methodologies and models with my organizational members in the future.</p> <p>I will always share my experience or know-how from work with my organizational members in the future.</p> <p>I will always share my know-where or know-whom at the request of my organizational members.</p> <p>I will always try to share my expertise obtained from education and training with my organizational members in a more effective way.</p>
<i>Life satisfaction</i>	<p>In most ways my life is close to my ideal.</p> <p>The conditions of my life are excellent.</p> <p>I am satisfied with my life.</p> <p>So far I have gotten the important things I want in life.</p> <p>If I could live my life over, I would change almost nothing.</p>
<i>Organizational rewards</i>	<p>I will receive monetary rewards in return for my knowledge sharing.</p> <p>I will receive additional points for promotion in return for my knowledge sharing.</p>
<i>Job Satisfaction</i>	<p>How satisfied are you with your current job?</p> <p>How satisfied are you with your current salary?</p> <p>How satisfied are you with your independence at work?</p> <p>How satisfied are you with your health care security & welfare/benefits?</p> <p>How satisfied are you with your professional status?</p> <p>How satisfied are you with your work schedule?</p>

Creativity supporting workplace from the employee's point of view

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Abstract

The goal of the paper was to find out how individual factors of work environment stimulate creativity of employees as an important part of success and prosperity of a company. The research was done from September to November 2016 in Nitra region. We focused on companies where we had supposed that the employees worked in creativity supporting work environment. A short questionnaire was delivered to 109 employees of five companies in which searched for subjective importance of impact of working conditions on the respondents. To make it clear, it is important to note that in 3 cases they were companies where the employees worked in offices (each employee had their own office or they shared it with a colleague) and in two cases they were companies where the employees shared „open space office“. We evaluated 86 questionnaires and the findings were interesting.

Respondents, who go to work every day, cannot choose their work place. A free choice of a work place brings new ideas. Moreover, important is the colour of the room or the desk and fact that a person can be all alone for a while as well. Creative corners might be a part of several other companies and they could support interesting ideas of the employees.

Open space office on emotional level within employees can evoke impression that emotional climate in the company is more relaxed and the company supports mutual responsiveness and compatibility. This type of work environment supports mutual awareness about issues even though the employees might feel discomfort in loud noise or low attention which might result in lower creativity. Other findings are a part of the paper.

Keywords: creativity, employees, workplace

JEL Classification: M12, M50, C12

1. Introduction

The current period of development of human society is known as the age of creativity - the US as well as Europe undergo extensive economic and societal transformation from an industrial economy to a creative economy. (Franková, 2011)

In the system of work with human resources in organizations there is a necessary transition from a paradigm of things shift to the paradigm of people. The main reason for the change in approach to the work with human resources, is the need to release their potential (especially creative, motivational, and integrative-regulatory) for the implementation of positive change in organization. (Šajbidorová et al., 2016) As wrote Christian Walter (2012), the greatest barriers for creative endeavors were the high work pressure, the fear of risk taking, freedom or autonomy, and the work environment, which is why new categories were created to reflect this.

Ergonomia should be one of the primary prerequisites within creation of administrative places to create environment where an employee will be able to focus on performance without being disrupted by noise, weak or overrating light or inappropriate chair. Similarly, this place must react to the company culture and identity. The result should be environment with pleasant, stimulating atmosphere which should motivate employees to higher performance. The working environment, its architectural design, or its colorfulness form part of corporate image and

corporate identity. The organization can be than easily recognized between their competitors. Developing organizational culture that stimulates and promotes creativity and innovation is an imperative for organizations seeking a competitive advantage. (Taha et al., 2016; Hambáľková, Lušňáková, 2012) Many benefits are manifested in the form of an improved company image and employees satisfaction. The atmosphere of mutual tolerance and respect leads of course to the greater creativity and work ethics. (Lančarič, Rovný, 2013)

The extant literature has clearly shown that innovative outcomes are mostly sourced from employee creativity. Over the past decade, research on creativity, which is defined as the production of ideas that are original and useful, has proliferated (Amabile et al., 1996).

We speak of „four P“ of creativity, four areas of interest: 1. „Personality“, 2. „Process“, 3. „Product“ and 4. „Physiology“. Some authors include even the fifth area – „Environment“. Far less authors deal with influence of environment even though they are inevitable for the creativity.

Employee creativity is critical to organizational competitiveness. However, the potential contribution made by the workspace and the physical environment is not fully taken into account because, up to now, it has been rather unclear how aspects of the physical environment, especially light, can support creativity. Consequently, in six studies, the present research investigated the effect of light and darkness on creative performance. The result: the darkness-related increase in creativity disappeared when using a more informal indirect light instead of direct light or when evaluating ideas instead of generating creative ideas. (Steidle, Werth, 2013)

Hoff, Öberg (2015) see the role of the physical environment for creative employees very important. The physical work environment was considered to offer three types of support for creative work for the participants: functional, psychosocial and inspirational. Creative processes would find better breeding ground if functional support, such as adequate lighting and tools, and psychosocial support, such as spatial possibilities for both privacy and communication, were provided. Without inspirational support, such as brainstorming rooms, dynamic planning and imaginative interior design, the work outcome was believed to become less creative. The physical environmental support model can be used by companies with an interest to provide creativity supportive workplaces. Moreover the design and appearance of workspace and individual ability to control the ambient conditions of the workplace have significant effect on their behavior, satisfaction and overall outcome including creativity (Samani et al., 2015). Aspirations for workplace design have been identified as: environmentally sustainable; foster innovation and creativity; establish connections; improve communication and collaboration; provide efficient space for effective work; flexibility over time; welcoming and connected to the community; healthy; and, up to date technology (Chapman et al., 2015). Good interior design of office environment could stimulate a manager's creativity and could therefore contribute to an organization's innovation (Ceylan et al., 2008).

2. Data and Methods

Innovation of a company together with creativity is a crucial part of success and prosperity of a company. The aim of the paper was to find out how individual factors of work environment stimulate creativity of the employees. The research was done from September to November 2016 in Nitra region. We focused on companies where we supposed that the employees in creativity supporting work environment. 209 employees of sixteen companies were given a short questionnaire in which we looked for subjective importance of influence of work environment conditions within respondents. It is important to state that in eleven cases they were companies where employees worked in offices (each employee had their own office or

they shared the office with another colleague) and in five cases they were companies where the employees shared „open space office“. We evaluated 193 relevant questionnaires.

Within evaluation of the questionnaires we used regression and correlation analysis. In the part ANOVA we tested zero hypothesis which says that the model we had selected to explain dependence (in our case linear regression line) is not appropriate (alternative hypothesis says the opposite). To evaluate this statement we use F test. Significance $F < 0,05$ (α - level of significance), i. e. H_0 denied, that means, the model was selected right. If we confirm statistically significant difference on the significance level up to 0,05 (5%) the alternative hypothesis will be accepted.

The newest approaches to forming the most appropriate and best work environment for employees which supports their productivity and creativity come out of the following facts. From the information above we resulted in creation of the questions of the survey.

The look and impression of the office or work space has significant impact on ease and creative thinking of the company employees as well as on the customers and business partners who enter the work space.

The second significant factor influencing concentration, cooperation, confidentiality and creativity of employees is the inner disposition of the office.

Noise is another factor and is firmly connected with the above mentioned disposition of workplace. It may be the main cause of employees' dissatisfaction in the office whereas it may cause undesirable distraction and therefore creativity is endangered. Their performance are consequently marked with higher defectiveness and this kind of environment negatively influences social climate in the company as well. The research of the Chicago University revealed that especially creative noise is optimal for creative process whereas extreme silent sharpens our attention and therefore disables our ability to think creatively. Another research about creative thinking revealed that distraction by communication of other people, phone calls, especially in case that we hear only the part of the conversation, is the most harmful.

Other factors are day light and lighting. Experts standup for the opinion that especially good view belongs to the most significant factors of productivity and creativity, especially if the view offers connection with nature. Little depth of space from the facade and lights designed for computerized workplace ensure excellent quality of natural as well as artificial lighting. The research published in the *Environmental psychology* magazine focused closely on the difference of creativity level in clearly and darkly environment in six studies. The research showed that dimly lighting makes us feel less concentrated and bravely examine and risk. Two studies tested this feeling and resulted in the fact that "darkness invokes liberating feeling without limitations and provokes creative working style."

We cannot omit colour of work environment which significantly influence creativity of employees. White colour is calming and in combination with another, let us say pastel colour, it may act soothing. In order to make workplace inspiring and supporting employees' creativity significantly, we may use vast colour scale. (Buncáková) Colour of a workplace influences us and plays games with our feelings and influences employee's concentration or creative thinking as well. Therefore it is smart to think what colours to select in order to make employees more positive.

Nowadays it is inevitable to deal with air quality and thermal comfort on workplace as well. Surveys show that due to higher air quality, productivity and creativity increase by 8 – 11 %. It is known that i fair quality is not sufficient, it may cause fatigue or attention deficit disorder to

human beings. The study of the Cornell University tested various temperature in offices of a big insurance company in Florida and found out the following: If the temperatures in the offices were low - around 20 degrees Celsius the employees made by 44 % more mistake than within optimal temperature of the room which is 25 degrees Celsius. The problem is, not only they feel uncomfortable in lower temperatures but they also feel more distracted, they feel cold and spend most of their energy to get warmer. And therefore they put far less energy to creative work and ability to concentrate.

3. Results and Discussion

Employees, who go to work every day, cannot select their workplace. On the other hand, thanks to new impulses a person comes across new ideas. Employees are attacked by factors which can determine their creativity level. In our paper we focused on the factors connected with ergonomics of a work place.

The offices of the Google Company are positive example of how to do it nowadays. Employees can select a workplace they want to work on the specific day. The selection of the place, the colour of the room or the desk and the factor of being alone for a while – it all can have a highly positive impact on creativity of employees. Thanks to group brainstorming excellent ideas emerge. In spite of this fact, employees cannot be forced to be creative, they have to start working on it.

Work environment and working atmosphere are crucial factors of the employees' satisfaction. Selection of colours and materials influences the feeling of ease and may eliminate stress connected with extreme work pace and therefore increase creativity of an employee (Burčáková). Creation of the interior should minimize negative impacts, utilize ergonomics in the interior and create conditions for healthy and suggestive environment.

Intensity of artificial light in the offices cannot reach below 300 luxes. As for the distribution of the light there should not be huge contrasts. A perfect type and character of the light provide comfort and therefore influence the employee's performance.

The colours subconsciously influence experiencing, moods and actual condition of an employee. They are one of the most impressive tools within creation of working atmosphere in the interior. White colour is the closest to the natural light. Peace, ease and harmony are often connected especially with this colour. Using it in the interior and its impact on mental health are definitely positive. In combination with other colour shade of yellow or green, it provokes ease and focus. Too many colours in administrative environment can raise not only visual but internal chaos as well. Again, there is a rule of individualism. Advertising and art agencies can afford even shocking or more extravagant interior with bright colour scale which supports creativity.

The answers of our questionnaire differ depending on the type of work space. Thus, if employees work in their own offices or share „open space office“ with colleagues. The employees who possess their own office (even though shared with a colleague) expressed positively in questions connected with thermal comfort, confidentiality and ease within work tasks. On the contrary, employees working in „open space offices“ perceived their work environment as problematic. Except noise, they negatively evaluated even thermal comfort, strong air-conditioning, missing personal space. Similarly we noticed interesting findings depending on the size of a company where, especially big companies focused on overall look and impression of work space which is important for employees as well as for the business partners. We supposed that the origin of the company's capital – thus, whether the company is strictly domestic or joint venture, is one of the decisive factors of employees' satisfaction.

because especially multinational companies are usually creativity supporting innovators. From the results of the questionnaire given we learned that domestic companies do not lag behind the multinational companies. They must naturally follow specific norms but the employees expressed their satisfaction within substandard effort, procedures and approach.

Within statistical evaluation of the questionnaire we therefore dealt with research of dependence between dependent and independent variables.

The first researched dependence was dependence between the type of a workplace (office / open space) and noise of the workplace. Zero hypothesis was formulated as follows:

H₀: There is no dependence between the type of workplace and its noise.

We found out that significance $F=6,7 \cdot 10^{-16} < 0,05$, thus H₀ is denied and we accept alternative hypothesis, thus strong dependence was confirmed between the type of a workplace and its noise.

Similarly other dependences were tested. We consequently searched for dependence between the type of a workplace (office / open space) and variable of air quality and thermal comfort.

H₀: There is no dependence between the type of a workplace and air quality.

Similarly like in the case mentioned above there is, according to our findings, dependence between the variables. (Significance $F=4,6 \cdot 10^{-11} < 0,05$). We therefore, as above mentioned, deny H₀ and accept alternative hypothesis.

Based on our findings we confirmed the third alternative hypothesis. We denied zero hypothesis which says that:

H₀: There is no dependence between the look of a workplace and the size of the company.

Based on the value (Significance $F=2,2 \cdot 10^{-4} < 0,05$) we can result in dependence between the look and overall impression of the space and independent variable of the size of the company.

Dependence between the company's capital origin – thus whether the company is strictly domestic or joint venture and variable of the look and overall impression of a workplace, was not confirmed (Significance $F=0,86 < 0,05$). According to our findings we can state that there is no statistically significant dependence between the given variables.

In the next part we searched for dependences between the factors of work environment influencing mutual creativity of employees.

We found dependence between the look and the overall impression of a workplace and colour of a workplace.

The second confirmed relationship which showed strong dependence was the relationship between disposition of a workplace and air quality and thermal comfort. We also found out dependence between disposition of a workplace and noise within workplace.

Based on our findings there is no dependence between the overall impression from a workplace and lighting of a workplace. We suppose that the given is caused by the fact that especially employees working on positions demanding creativity prefer ease as a factor that positively influences their creativity. And especially lighting is the factor that is not very significant for them because creativity is supported by darkness or twilight.

One of the important factors within planning and consequent resolving of a workplace, thermal conditions, lighting, noise, its color, resolving its overall disposition, is the comfort of the employees who spend most of their time in such environment. If an employee enjoys the job

and likes their work environment, they will be more creative and effective for the whole company. Scientifically proven, motivated employees bring most new ideas and they are more effective.

A boss, a manager, an accountant - these are the positions demanding concentration and peace, therefore it is appropriate for such employees to have individual office shared at most with 1-2 colleagues.

On the contrary, if employees work in a call center, advertising agency, IT company and so forth, they need to cooperate in teams, their work does not request concentration/peace and therefore bigger offices or „open space offices“ might be appropriate for them in order to work together and solve the issues that may occur flexibly and quicker. „Open space“ offices can raise the feeling that emotional climate in the company is more relaxed and the company supports mutual helpfulness and cohesion.

4. Conclusion

„Openspace“ offices are nowadays probably the most standard type of offices, especially for big companies employing numbers of young people. They are financially more advantageous for the employer, provide possibility of control and oversight of the employees because the managers of specific teams sit together with their employees and not in a separate office. Increasingly, there are debates about disadvantages supported by a scientific research realized throughout Slovak Republic as well as in the world. Employees in such offices face increased number of impulses they have to cope with. Increased noise, phones ringing as well as conversation of employees, belong to impulses which can negatively influence the performance. Many now argue about lower concentration of attention, perceive external sensation which distract their attention from the issue they try to focus on. Increase interpersonal pressure in such form reflects in relationship culture with absence of courtesy in company communication. The employer should consider solution of a workplace for the employees to make them feel comfortable. Except workplaces, they should create even mutual social rooms for their employees, as well as relaxing rooms, or possibly divide space by screens, plants and so forth.

Offices, conference rooms and relaxing rooms are being changed now in many companies. Even the companies operating in Slovak Republic realize the importance of creativity of their employees for their further development or innovative solutions. The capital origin does not play a huge role in this issue. The walls are more and more colourful and serve for new functions as well – they might be used as a writing board instead, for example. Traditional chairs are being replaced by not traditional sitting or even lying. The companies provide their employees with a view of the cityscape or amazing nature.

Positive effects of unusual offices are confirmed by psychiatrists as well. These kinds of offices give employees freedom, support their fantasy and creativity. It is not appropriate for all the positions, though. If employees do the job that demands concentration, it is suitable to avoid too much creativity on a workplace. Even though these employees might be happy to have interesting and well equipped relaxing room. Atmosphere in such room can rip them out of stereotype and may offer perfect psychohygiene.

Creativity is one of the most essential conditions of creation and spreading innovations in the society and its economy both on macro and micro level. A part of the innovation strategy of each company should therefore be stimulation of creativity of its employees.

Work environment is responsible for productivity and effectiveness of work as well as it affects health of employees. Influence of work environment on the employees is therefore crucial. The better the work place is adjusted to assumed work of a human being, the higher culture and productivity of their work. Healthy and happy employees are, in a long term perspective, an important part of productive and successful business.

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Selected professional competences of future managers

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Abstract

The professional education of the future managers is a multi-factor process where the different subjects and objects of the educational process interact in the certain terms of the educational environment. The objective of the submitted paper is the analysis of the selected students' competences in the managerial and economic study programs. The analysis is targeted at the students' skills to apply the mathematical theoretical and computational attainments. The authors concentrate their attention on the students of the bachelor study program "Business Management" at the Slovak University of Agriculture in Nitra in Nitra. Many of those students are the participants of the mobility abroad and therefore English language acquires the character of the specific educational and communication tool. In our paper we present the analysis of the results of students' examination evaluations in mathematics and the levels of their special competences in the selected types of mathematics assignments in the academic year 2015/2016. The research related to the professional competences of the students demonstrates that the significant prerequisite for the stable attainments is their inherent motivation and the active processing of the acquired knowledge.

Keywords: professional competences, intellectual capital, study outcomes, e-learning, quality of education

JEL Classification: I21, C12, C60

1. Introduction

The managers are the most important factor in business because they are able to transform the management in companies and raise it to the required level (Sedlák, 2000). This author also suggests that a manager can be defined as a person whose primary activities are the managerial functions, i.e. planning, organizing, leading and control. Hrehová (2010) states that more and more severe competition exists not only on the goods and service market but also on the labor force market. Similarly like firms are forced to innovate permanently their products and search for new opportunities, also every individual, who wants to achieve a higher level in his/her professional career, has to innovate improve his/her knowledge and professional competences.

The research of the managers' competences at the different levels is dealt with in many scientific publications (Shou&Wang, 2017). They emphasize that the managerial activities are important in the different areas, such as industrial companies with the technical production (Burda, Čičo, & Kaplík, 2012), agricultural enterprises (Rovný, Dobák, & Récky, 2011), as well as the social sphere, where the managers are involved in the different levels of municipality, educational system (Balazova&Papcunova, 2015), etc. Most of the agri-food complex enterprises see opportunities especially in the internationalization, globalization and regionalization in the agri-food sector, in pursuance of this they are gradually developing innovative activities and trying to work on their competitive advantages (Ubrežiová, Kapsdorferová, & Sedliaková, 2012). The managers try to find out the customers' opinions and incentives for purchasing bio-foodstuff on the Slovak market (Kozelová, Matejková, & Qineti, 2010) because the consumers concentrate their attention to the ecological and healthier foodstuff. The sphere of financial

sources management involves also the management burden. Information support of cost controlling constitutes accounting, calculations and budgeting of costs (Váryová, FerencziVaňová, Košovská, & Krajčírová, 2015). Authors Molnár and Naár-Tóth (2015) present specific methods how to use information to become successful in the valuation and trading of securities, facilitate investment decision making, meet regulatory requirements, or manage risk.

The university education of the future managers involves two principal segments. The first one comprises the basic theoretical subjects, social sciences, thus the study is targeted at the specialist education. The second segment focuses on the practical acquisition of effective communication, the development of thought flexibility, the application of decision-making processes in management, the command of problem solving, the acquisition of abilities for team work, the abilities to present the acquired knowledge, etc. All of these elements are important for the successful assertion of the managers in their future positions.

All universities are searching possibilities how to attract students and offer them high quality education. The internationalization of universities means creating links and strengthening cooperation with partners and one of the examples is also the new study program International Master Double Degree Program in Business Economics (Gálová, Ubrežiová, Krasnodębski & Horská, 2016) which will be provided jointly by the University of Agriculture in Krakow, Poland and the Slovak University of Agriculture in Nitra in Nitra, Slovak Republic from the academic year 2016/2017. The graduates of this study program will be able to analyze complex business processes, propose and implement managerial decisions related to functioning of those processes.

The assessment of learning outputs is one of the crucial components of the instruction. The teachers have different ideas regarding the implementation of assessment strategies. Assessment should be objective; it should correspond to the level of knowledge achieved by students in education (Švecová, Drábeková & Hajdúk, 2014). The managers' competences in ICT rank among the effective tools for the acquisition of quality and prompt information, which are the prerequisites for the success of big and small organizations. The command of ICT is useful also due to the access to the information sources which can be available in the different formats on the Internet (Mišútová & Mišút, 2012). The current trend at universities is to offer to students the study programs with the subjects taught in English. In those study programs the specialist, mathematical, language and information technology competences of the students are being developed (Országhová, Hornyák Gregáňová & Tothová, 2017, Országhová & Horváthová, 2015).

In this paper we focused the attention to the mathematical skills and competences of the future managers who are being educated in the bachelor study programs at the Faculty of Economics and Management (FEM) Slovak University of Agriculture in Nitra (SUA) in Nitra.

2. Data and Methods

We acquired the methodical material for the paper by studying the specialist articles and literature related to the pedagogical research. The next source of material was the experience and practice of teaching the compulsory subjects Mathematics IA and Mathematics IB in the first year of study at FEM SUA in Nitra. Both mentioned subjects end with the exam and our methodological approach is based on the analysis of the students study results – exams outcomes. The essential subject matter of research is the significance of differences between the exam results of the students in the subject Mathematics IA and Mathematics IB. Apart from the exam results we also analyzed the differences of the achieved results of students in solving

the selected pairs of tasks in these subjects and determined the level of students' mathematical competences.

In the course of the academic year 2015/2016 the research was pursued at FEM SUA in Nitra, its objective was to compare the knowledge level in mathematics of the students who study the compulsory subjects Mathematics IA (winter term) and Mathematics IB (summer term). The number of participating students: 87 in winter term and 90 in summer term; all students were from study program "Business Management". We tested the null hypothesis stating that there is no difference between knowledge level in mathematics of the students studying the compulsory subjects Mathematics IA and Mathematics IB. We applied the paired t -test and calculations were carried out through the tools of MS Excel 2010 and program Statistix for Windows, version 8.0.

The paired t -test can be described as follows (Markechová, Stehlíková, & Tirpáková, 2011). Let $(x_1, y_1), (x_2, y_2), \dots, (x_n, y_n)$ is the random sample from the basic aggregate with the normal distribution $N(\mu_1, \sigma_x^2)$ for statistical attribute X and with the normal distribution $N(\mu_2, \sigma_y^2)$ for statistical attribute Y . The monitored attribute X and Y were the exam marks achieved by the students in the subjects Mathematics IA and Mathematics IB.

Then we define the null hypothesis $H_0 : \mu_1 = \mu_2$ (there is no statistically significant difference between the means of the statistical samples) against the alternative hypothesis $H_1 : \mu_1 \neq \mu_2$.

We will use statistics as the testing criterion
$$t = \frac{|\bar{d}|}{s} \cdot \sqrt{n} \quad (1)$$

Symbols in the testing criterion express:

- Difference
$$\bar{d} = \frac{1}{n} \sum_{i=1}^n d_i; \quad d_i = x_i - y_i \quad (2)$$

- Dispersion
$$s^2 = \frac{1}{n-1} \sum_{i=1}^n (d_i - \bar{d})^2 \quad (3)$$

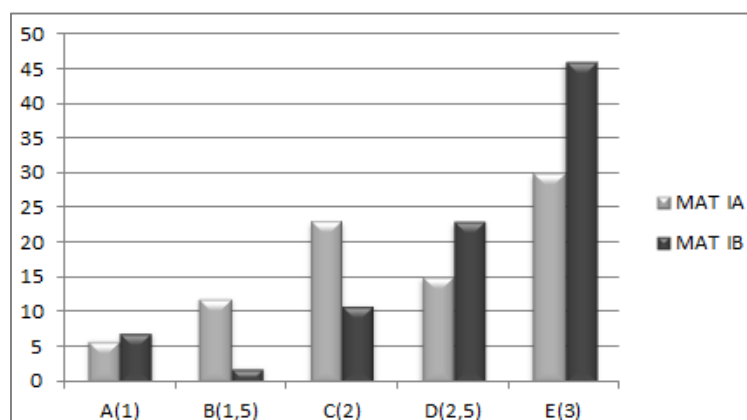
The critical region is:
$$W_\alpha = (-\infty, -t_\alpha(n-1)) \cup (t_\alpha(n-1), \infty), \quad (4)$$

where $t_\alpha(n-1)$ are the critical values of Student's t -distribution with $n-1$ degrees of freedom.

3. Results and Discussion

Mathematical apparatus is proper means for economic analysis, formulation of relations in business market and production sphere by quantitative methods. We analyzed the data received from the attainment tests and exam tests in the subjects Mathematics IA and Mathematics IB. The final evaluation of a student at exam includes the written test and also the points from the attainment test and seminar project.

The Figure 1 indicates the graphic form of evaluation of students at the exams in subjects Mathematics IA and Mathematics IB in the academic year 2015/2016, where the standard scale is used A(1) to FX(4). In our sample we excluded students with exam grade FX(4); this section consisted of small number of students and therefore was excluded.

Figure 1: Final marks from the subjects Mathematics IA and Mathematics IB

Source: authors' processing

We applied the paired *t*-test for the analysis of the final marks and results of calculations are summed up in the Table 1. Thus, the null hypothesis about the equal knowledge level of students in the given subjects at the significance level $\alpha = 0.05$ cannot be accepted ($P = 0.0001 < 0.05$); it means that there is statistically significant difference between the exam results achieved by the students in Mathematics IA and Mathematics IB.

Table 1: Paired *t*-test for Mathematics IA (NMATIA) and Mathematics IB (NMATIB)

Null hypothesis: difference = 0	
Alternative hypothesis: difference \neq 0	
Mean	-0.2882
Std Error	0.0707
Mean - H0	- 0.2882
Lower 95% CI	- 0.4288
Upper 95% CI	- 0.1476
T	- 4.08
DF	84
P	0.0001
Cases Included 85	
Missing Cases 5	

Source: authors' processing

In addition to the exam results we were interested in the success rate of students in solving various tasks in tests during the semester. We analyzed the level of mathematical attainments by using the pairs of tasks where the similar procedures in their solving are applied. A student could achieve 10 points for each task and tasks were focused on these topics: 1st theme was "Differential calculus" (tasks No. 1 and No. 2), 2nd theme was "Integral calculus" (tasks No. 3 and No. 4) and 3rd theme was "Linear algebra" (tasks No. 5 and No. 6). The overview of the analyzed tasks is indicated in the Table 2.

Table 2: Formulations of analyzed tasks

<p>Task No. 1: Calculate first and second derivative of the function</p> $f: y = \frac{x^2 - 5}{3x^2}$	<p>Task No. 2: Calculate the first partial derivatives of the function</p> $f: z = \frac{3}{2}x^3y^4 - 2x^2y^6 - 8y + 6$
<p>Task No. 3: Find indefinite integral</p> $\int \frac{\ln x + 4}{x} dx$	<p>Task No. 4: Calculate definite integral</p> $\int_1^e x \cdot e^{-x} dx$
<p>Task No. 5: Determine the rank of a matrix</p> $A = \begin{pmatrix} -3 & -3 & -4 \\ -4 & -5 & -6 \\ 1 & 1 & 1 \end{pmatrix}$	<p>Task No. 6: Solve in R^3 the system of linear equations</p> $\begin{aligned} 3x + y - 4z &= 0 \\ x - z &= 0 \\ 2x - y &= 0 \end{aligned}$

Source: authors

In the Table 3 the results are given for the both subjects and for the particular tasks. We can see that the average grade “NMATIA”, 2.2965 is better in the first semester than in the second one for “NMATIB”, 2.5674. It is related to the average number of points in each task. Similarly, the average number of points is better in the first semester. The lowest average value of points was achieved in the task No. 4 with the topic “definite integral”. The highest average value of points was achieved in the task No. 5 with the topic “rank of matrix”.

Table 3: Data about Mathematics IA (NMATIA) and Mathematics IB (NMATIB) and tasks

	Mean	Std. Deviation	N
NMATIA	2.2965	0.64342	86
NMATIB	2.5674	0.58964	89
Task No.1	5.6322	1.9115	87
Task No.2	5.0805	2.03583	87
Task No.3	5.0889	1.68032	90
Task No.4	4.1111	1.89289	90
Task No.5	5.6667	1.80511	90
Task No.6	4.9444	2.15866	90

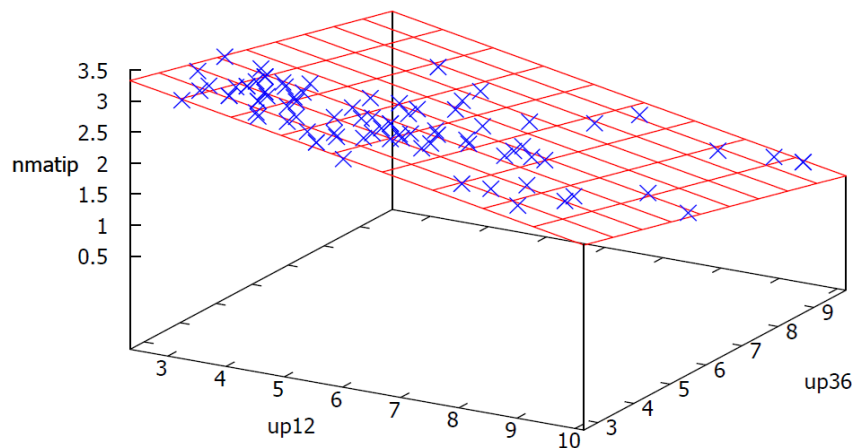
Source: authors' processing

Based on the results we can conclude that students are able to apply the appropriate procedures in solving tasks and they understand the logical order of steps in calculations in tasks where the similar procedures are applied. One of the important factors of educational effectiveness is the motivation of students and their capability of self-study. Mathematics develops the creativity and the logical thinking, help to elaborate new ideas and realize changes in real life.

We tried to create a regression model for an average grade based on the tasks points in the research sample. The model expresses a regression dependence of the average mark “*nmatip*” based on the average point evaluation of the first two tasks “*up12*” in the first semester and an average point evaluation of four tasks “*up36*” in the second semester. The Figure 2 indicates graphically the created regression model. Thus, on the third axis *z* there is the estimation of the average grades for both semesters, mathematically:

$$nmatip = 4.142 - 0.173 \cdot up12 - 0.156 \cdot up36 \quad (5)$$

Figure 2: Regression model for average grade based on tasks points



Source: authors' processing

4. Conclusion

In our contribution we analyzed the knowledge level in mathematics of the students at the FEM SUA in Nitra in the compulsory subjects Mathematics IA and Mathematics IB. The research sample included students of the bachelor study program “Business Management”. We applied the paired *t*-test and detected that there is statistically significant difference between the exam results in mentioned mathematical subjects. We analyzed also the differences in solving tasks which use the similar methodical procedures. As the most complicated tasks were detected tasks with the topic integral calculus.

The education is gaining new attributes in the contemporary society. The university education of future managers includes the study of higher mathematics. The level of these competences depends on many factors and the results reflect the subjective approach of each student to the study of the subject of mathematics. In order to pass the examination in mathematics successfully it is important for the students to understand the terminology, procedures of calculation and ability to utilize them. The contemporary generation of managers should be able to practice applied mathematics in the collection and interpretation of quantitative data.

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Standard of Living in the EU Countries

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Abstract

Proposed paper is focused on analytical comparison of the living standards in countries of the European Union. The analytical comparison in its substance represents the application of analytical and statistical processes and methods to attain a complex foundation for further comparison. The analyses are carried out on a set of 28 member states of the European Union. Standard of living evaluation was based on 22 indicators which described economic, social and welfare situation in each country. In the first part, the countries were sorted into clusters in a way, that the attributes within the clusters are similar while the features between two clusters are different. In the second part were countries ranked according to their level of the standard of living. Denmark achieved the highest value of the standard of living index and therefore could be marked as the country with the highest standard of living. It was followed by Sweden and Austria. On the other side, Bulgaria represented the country with the lowest standard of living, followed by Greece and Romania. These results were like those which achieved by analyzing the clusters. The countries of the third and fourth cluster were located at the first places, while the countries from the first and second cluster were at the bottom of the European Union according to their standard of living.

Keywords: Standard of living, analytical comparison, cluster analysis, indexing

JEL Classification: I31, D63, C38, C43

1. Introduction

Standard of living reflects the level of wealth, comfort, material goods and services which are available for a certain socio-economic class in a certain geographic area, claims journalist Fontinelle, A. (2011). The living standard can be evaluated on the base of various factors such as income, quality and availability of employment, class dissimilarity, level of poverty, life expectancy, quality and availability of housing, costs of goods and services, number of working hours needed for purchase of necessities, number of days of paid leave, quality and availability of education, infrastructure, gross domestic product, level of inflation, economic growth, economic and political stability, political and religious freedom and quality of the environment. The standard of living does not reflect merely the economic development of the country but also other areas of people's everyday lives, which are not strictly separated from the state of the country's economy but still belong to other areas and can be assessed apart.

The standard of living is closely related to quality of life and is it often swapped with this term. However, the term 'quality of life' has a more subjective meaning than its colleague and there are not many authors who would define it precisely but would rather just use it as an indicator. Barcaccia, B. et. al. (2013) concluded that the term 'quality of life' is mostly used in medical centers where doctors strive to provide their disabled patients with their treatment a certain 'quality of life'.

Therefore, the two terms 'quality of life' and 'quality of living', which is the synonym for 'the standard of living', should not be confused. Lagas, P. et al. (2014) state that the quality of life

refers to an individual and has a more subjective meaning representing person's emotions and personal life. However, the quality of living refers to a country and reflects personal safety and security, health, transport infrastructure, availability of personal goods, adequate housing, schooling and recreation.

The other term which can be confused with the 'standard of living' is the term 'well-being'. Diener, E. et al. (1999) claim that subjective well-being is closely related to personal experience of individuals. It is composed of three main areas which is pleasant affect, unpleasant affect and life satisfaction. The pleasant and unpleasant affects mean good and bad emotions and moods. Life satisfaction is mostly a cognitive indicator reflecting personal satisfaction with his own life. Therefore, the level of well-being is very difficult to be evaluated and measured.

The standard of living is a very multidimensional indicator. Because it depends not only on variables that are measurable, but also on subjective feelings and attitudes of people, there is a difficulty in measuring it properly. However, the standard of living can be understood to stand on nine pillars:

- Economic and financial pillar,
- Labor force pillar,
- Health pillar,
- Environmental pillar,
- Educational pillar,
- Development pillar,
- Infrastructure pillar,
- Safety and tolerance pillar,
- Political stability pillar

The economic and financial pillar encompasses household income, income inequality, poverty rate, inflation rate, gross domestic product and other factors such as foreign direct investment, net imports or domestic and international trade. The other but not less important pillar reflects the labor market and is composed of variables such as employment and unemployment rate, hours of work required to purchase necessities, number of vacation days per year, share of people with low wage in the society or governmental taxation on people with low wage. Importance of this pillar emphasizes Polakova and Sojkova (2014). The health pillar reflects the health status of the country and its citizens, where life expectancy, infant mortality or quality and availability of healthcare is calculated. Environmental pillar is becoming more important than ever, as a clean and unspoiled natural environment is becoming very rare, air/water/soil pollution is on daily business but affects generations and generations that come after us. Moreover, the climate change can negatively affect the standard of living through droughts, floods, acid rains etc. Further, the educational pillar could be understood as the affordability, availability and quality of education provided for the citizens. The development pillar encompasses research and development, innovation and technological progress in the country. Generally, it is believed that the higher the technological progress, the easier it is to live and therefore the standard of living increases. Infrastructure pillar is understood as a variable for availability and quality of road, railway and air transport as well as oil, natural gas and water pipelines, electricity, internet and telecommunications connections. The standard of living stands also on the safety and tolerance pillar where criminality, personal and public safety, corruption and racial/religious/ethnic/cultural intolerance is assessed. The political stability pillar cannot be neglected either. It encompasses trust in political and governmental institutions, political stability, voters' turnover at elections or trust in politicians. Multidimensionality of

this topic should be therefore considering also in its investigation as stated Benda Prokeínová and Hanová (2011) which could be done by various ways.

Presented paper is focused on comparison of the living standards of the EU member state countries from an analytical point of view. As the attributes are described on national level of many countries simultaneously, the data used were secondary, retrieved from official governmental and non-governmental organizations' websites. The first objective of presented analysis is to classify countries into groups per their standard of living structure. Next, analyzed variables are used for the construction of Standard of living index and countries are ranked according their standard of living.

2. Data and Methods

Analysis includes data about 28 EU countries, namely Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), the Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (EL), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Poland (PL), Portugal (PT), Romania (RO), Slovak Republic (SK), Slovenia (SI), Spain (ES), Sweden (SE) and the United Kingdom (UK). To maintain comparability, ratios or shares from the total countries' populations or total countries' GDP and variables calculated per one inhabitant were used.

The majority of the data were retrieved from the official website of Eurostat. However, also Human Development Report and Transparency International websites were used to extract data. Some of the data were retrieved from the year 2015, if it was available to attain them. However, most of the data were downloaded from years 2014 or 2013. Special case was the voter's turnout indicator, which was extracted from different years as the time for national elections is different in each country. These data were retrieved according to the latest national elections in that particular country, what represented the past 4 years (2015-2012) as the time gap between the elections usually takes exactly four years.

The data were sorted and only the relevant ones which were predicted to be somehow connected with the standard of living were used in the analysis. Analysis includes following variables:

The Human Development Index – is the value of the HDI as calculated by the Human Development Organization. The HDI is composed from three main components: life expectancy, education and GDP which is assumed to represent the standard of living in the methodology of the Human Development Organization.

The Corruption Perception Index – as published by the Transparency International, represents the degree of corruption in the country. The corruption negatively affects the standard of living due to higher costs and lower equality, people are discouraged to strive for perfection and therefore the economic and social situation stagnates.

These data were retrieved from Human Development Organization [HDO] and the Transparency International. However, all the following data were retrieved from Eurostat official website.

The percentage share of population living in a dwelling which is not comfortably cool during summer times – this variable indicates the stage of people's dwelling accommodation. Only people enjoying high standard of living could afford air conditioner.

The real GDP per capita – means the GDP adjusted for inflation calculated per one inhabitant.

Annual net earnings – for a two-earner married couple, one at 100 %, the other at 33 % of an average worker, with two children, expressed in Euro currency. This variable reflects the eventual number of earnings after expenditures that a typical household consisting of two adults and two children would earn. This variable indicates whether people have difficulties to make ends meet, then their standard of living will not be high.

Labor cost – labor cost levels for industry, construction and services area (except public administration, defense and compulsory social security area) expressed in Euro currency. Countries with high standard of living provide their labor force with more earnings and therefore the labor costs should be higher in such countries.

Social protection expenditure – total government expenditure for social protection that are designed to protect people against risks from unemployment, parental responsibilities, health care and invalidity, the loss of a spouse or parent, old age, housing and social exclusion. The data are expressed in purchasing power standard per inhabitant.

Renewable energy – the percentage share of renewable energy in gross final energy consumption.

Income inequality – the ratio of total income received by the 20 % of the population with the highest income (top quintile) to that received by the 20 % of the population with the lowest income (bottom quintile). Income is understood as equalized disposable income.

Unemployment rate – the long-term unemployment rate.

R&D expenditures – total intramural Research and Development governmental expenditures expressed in purchasing power standard per inhabitant at 2005 constant prices.

Trust in political institutions – represents the average rating of trust in the police, in the legal system, in the political system and in other state institutions. People with a high standard of living are satisfied and believe the country works for their good. This indicator can be also connected with corruption or the economic development of the country.

Average rating of trust: in the police, in the legal system, in the political system, in others.

Voter's turnout – represent the share of voters voting in national elections. This indicator is closely connected to the previous one as the number of voters entering elections depends on the trust in political institutions and politicians.

Satisfaction indicators – is a set of subjective indicators withdrawn from a sample of representatives from each country who had to evaluate their attitudes towards various questions on a five-level scale. The set involves the satisfaction with financial situation, the satisfaction with accommodation, the satisfaction with job, the satisfaction with commuting time, the satisfaction with time use, the satisfaction with recreational and green areas, the satisfaction with personal relationships, the overall life satisfaction, and the satisfaction with pursuing the meaning of life.

Analytical procedure:

1. First, factor analysis was applied to decrease data dimension and derive major factors of standard of living.
2. Countries were classified according their standard of living with the use of cluster analysis. Factors of standard of living were used as inputs into this analysis.
3. In the next step was applied indexing to create Standard of living index which was used to rank countries according their performance on this field. First, data was normalized,

then was derived the weight for each variable in the index. Finally, countries were ranked according their Standard of living index.

More detailed description of methods used in these steps follows:

2.1 Factor analysis

The main aim of the factor analysis is to evaluate the structure of relationships among the variables and find out, whether they can be divided into groups in which their mutual correlation would be significant while the correlations between these groups would be insignificant. The pursued aim is to create new variables, so-called factors which cannot be measured in real, but which provide users with understanding the analyzed data or to use them in further analyses. The matrix of factor weights helps to identify the relationship among the common factors and the identifiers. Rotation of factors contributes to find such a matrix of weights that is more acceptable to be interpreted. The first solutions obtained through PCA method usually cannot be reasonably interpreted. Therefore, the factors are needed to be rotated and more sensible factors should be generated. There are many transformation methods dividing into orthogonal (rectangular) and angular (oblique) methods of rotation. The orthogonal rotation creates noncorrelated factors while the latter does not. When assessing the significance of factor weights, the marginal values of factor weights are used. The already significant factors are those whose values are greater than 0,3 in absolute terms, medium significant are those with value greater than 0,4 in absolute terms, and very significant are those greater than 0,5 in absolute terms

2.2 Cluster analysis

The main aim of the cluster analysis is to divide the objects into cluster so that the objects belonging to that same cluster are similar in the highest possible way, while the objects belonging to other clusters are differing from each other as much as it is possible. The cluster methods can be either hierarchical or nonhierarchical. The hierarchical methods can be either agglomerative (integrating) or divisional (disruptive). The agglomerative methods are based on gradual integration of the objects from the most like those most differing. At the first step all objects create its own cluster and at the end all objects are gathered in one cluster. The divisional method works on similar basis but in reverse order. The hierarchical methods can be easily displayed graphically by a hierarchical tree, a so-called dendrogram, where the process of clustering or decomposition is pictured.

2.3 Indexing

The indexing stands for creating an index, which is a linear combination of several original variables. The indexing process starts with normalization through logarithm transformation of the original data. Through the logarithm transformation the variables obtain normal distribution and therefore can be used in indexing.

The second part of the indexing process relates to weights estimation. The weights represent the coefficients of the linear function through which the index will be computed. The weights are estimated from the correlation matrix of the log transformed original data. The individual weights are calculated as follows:

$$w_i = \frac{\sum c_i \sum c_{ij}}{\sum c_{ij}^2} \quad (1)$$

Where:

w_i – weight of the particular variable

c_i – correlation coefficient of the particular variable

c_{ij} – correlation coefficients of all variables in the correlation.

The Equation 1 calculates the weights of the variables as they will be counted in the index. The very index is then calculated according to Equation 2.

$$I_j = \sum w_i * x_{ij} \quad (2)$$

Where:

I_j – value of the index for the particular observation

w_i – weight of the particular variable

x_{ij} – value of the variable appertaining to the observation

3. Results and Discussion

The Factor analysis with communality with set all priors to one was run. There were two variables, namely the voter's turnout in national elections and the environmental index, which are not adequate for the factor analysis. To run the factor analysis properly, the environmental index was decided to be excluded from the analysis. The environmental index was omitted also because the environmental pillar was already represented by the waste index. In addition, the environmental index surprisingly did not correlate with other variables even though it would be only logical to expect it.

3.1 Identification of the Standard of living factors

The chosen data were subjected to Factor analysis. The Eigenvalues with value greater than 1 or cumulative variability at least 70 % indicate the number of factors that are sufficient. According to value of Eigenvalues, the number of sufficient factors is three. However, according to the cumulative variability, only two factors are needed in order to express at least 70 % of the total variability.

Because the input data were multidimensional, ranging from economic, financial and subjective perception, through health and education to environment and safety fields, three factors as Eigenvalues stated, were used in the Factor analysis. Two factors could not sufficiently describe the diversity of the standard of living.

Table 1: Factors of the Standard of living

	Factor1	Factor2	Factor3
HDI	0,43548	0,81541	-0,05514
Corl	0,54213	0,66374	0,35421
ppl_not_cool	-0,52757	-0,57422	-0,10959
Trust	0,47917	0,3698	0,68559
GDP	0,24056	0,87241	0,18136
net_earn	0,24959	0,93816	0,13137
l_cost	0,24941	0,92552	0,16873
soc_pr_exp	0,20468	0,92992	0,14992
voters_nat	-0,01061	0,78023	0,24511
inc_inequal	-0,54211	-0,42147	-0,05122
unemp_rate	-0,43274	-0,1407	-0,72134
R&D_exp	0,48863	0,75418	0,27468
sat_fin_sit	0,60048	0,57498	0,44819

sat_accomod	0,85282	0,37764	0,14422
sat_job	0,86427	0,1051	0,31031
sat_commu_t	0,81081	0,40194	0,20575
sat_time_use	0,84582	0,27475	0,22829
sat_overlife	0,80968	0,40298	0,27425
sat_recr_green	0,82434	0,29471	0,32493
Sat_liv_env	0,85144	0,17899	0,18172
sat_perso_rel	0,89804	0,11748	-0,0081
health_index	0,40933	0,70507	-0,36649

Source: Authors work

The factor analysis with varimax rotation created following factors, as shown in Table 1. The values greater than 0.5 in absolute terms are highlighted. Such variables participate mostly on the factor variability and it can be estimated that those variables create and compose the given factor. Other variables take their part in the creation of the given factor as well. However, their contribution is much smaller and sometimes negligible.

Based on this theory the three factors were examined. The first factor is mostly composed of subjective variables expressing personal self-defined satisfaction with various areas of everyday life of a representative sample of people. Therefore, the second factor will be labelled as *the subjective factor*.

On the contrary, the second factor, the second factor is composed of many different variables from which some do have something in common while others do not. All in all, the first factor mostly represents the objective, measurable variables. Therefore, the first factor will be called *the objective factor*.

The third factor is in majority composed from only two variables – the average trust in state institutions and the unemployment rate. The third factor can be labelled as *the trust and unemployment factor*. The factors derived from the factor analysis are now not correlated and therefore they can be used to cluster countries into groups.

3.2 Classification of the countries according their standard of living

As we mentioned above, the condition for the cluster analysis is the non-correlated input data. In the previous part, the factor analysis was realized and four not correlated factors were built up. However, in the beginning of the factor analysis the environmental index was omitted because it did not correlate with any other variables and therefore could not be used in the factor analysis.

To maintain the highest explanatory power, now the environmental index will be incorporated into the analysis once more. The condition of non-correlation with all input variables is fulfilled, as shown in Table 2. Therefore, the environmental index can enter the cluster analysis.

Table 2: Correlation between factors and environmental index

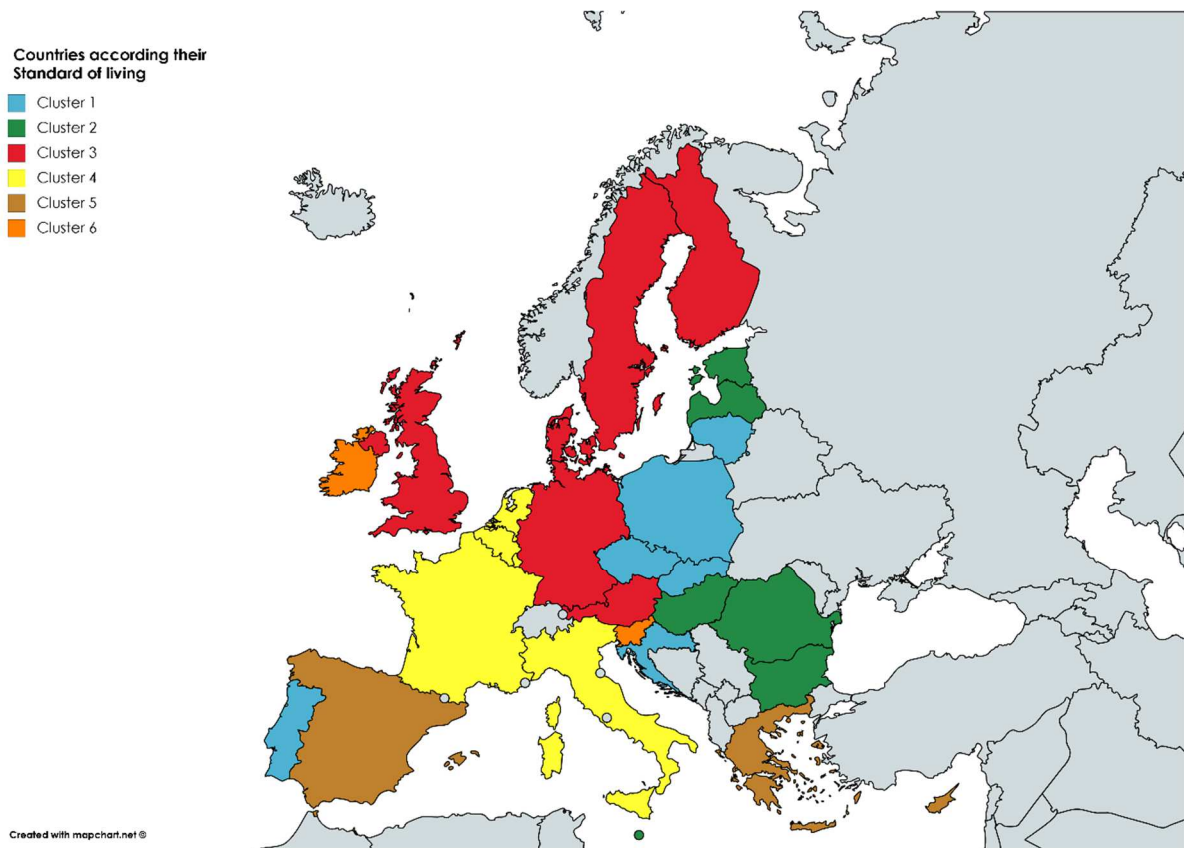
pearson correlation coefficients	factor1	factor2	factor3	factor4
envi_index	-0,20541	-0,17947	-0,01976	0,34535
Pvalue	0,2944	0,3608	0,9205	0,0719

Source: Authors work

Cluster analysis was applied and after selection, the final formed clusters are as follows:

- Croatia, the Czech Republic, Lithuania, Poland, Portugal and Slovak Republic are all in Cluster 1,
- Bulgaria, Estonia, Hungary, Latvia, Malta and Romania are grouped in Cluster 2,
- Austria, Denmark, Finland, Germany, Sweden and the United Kingdom form the Cluster 3,
- Belgium, France, Italy, Luxembourg and Netherlands are together in Cluster 4,
- Cyprus, Greece and Spain are joined in Cluster 5 and finally,
- Ireland and Slovenia belong to Cluster 6.

Figure 1: Countries clustered according their standard of living



All these clusters are graphically presented in Figure 1 where each cluster is presented in a different color. As can be seen, the Cluster 1 and Cluster 2 are composed mostly from post-socialist countries. It is presumable that the countries within one cluster enjoy a similar standard of living. Of course, there are differences between these countries. However, the differences within the clusters were minimized by the cluster analysis, while the differences between other clusters were minimized.

North European countries together with Germany and Austria belong to Cluster 3. The division was carried out not by geographical area but rather other indicators mentioned above. But still, most of the clusters are formed from countries from quite similar geographical areas or countries with common history. Cluster 2 can be the one with the lowest standard of living, while Clusters 3 and 4 are composed of such countries that are considered to have the highest standard of living among European countries.

3.3 Ranking of the EU countries by their standard of living

This part is focused on ranking the EU countries by their standard of living. The standard of living index was created using correlation matrix to calculate the weights of each normalized and standardized indicator which were subsequently computed together as a weighted sum of all these indicators that were used also in previous analyses. In the next step, all European Union member states were ranked following this standard of living index. The outcomes are illustrated in Table 3. The *Rank* column represents the ranked position of the country in terms of the European Union. The *Index* column stands for the value of the index of the living standard achieved by the country and the *Cluster* column stands for the number of cluster where the country was joined in previous analyses.

Table 3: Standard of living Index and clusters

Rank	Country	Index	Cluster	Rank	Country	Index	Cluster
1	Denmark	0,9968	3	15	Poland	0,3936	1
2	Sweden	0,9056	3	16	Slovak Republic	0,3301	1
3	Austria	0,8863	3	17	Lithuania	0,3116	1
4	Finland	0,8421	3	18	Cyprus	0,3051	5
5	Luxembourg	0,7824	4	19	Spain	0,2992	5
6	Ireland	0,6954	6	20	Estonia	0,2946	2
7	United Kingdom	0,6707	3	21	Portugal	0,2522	1
8	Germany	0,6692	3	22	Italy	0,249	4
9	Netherlands	0,6637	4	23	Hungary	0,1966	2
10	Belgium	0,59	4	24	Croatia	0,1766	1
11	France	0,5023	4	25	Latvia	0,1752	2
12	Slovenia	0,4937	6	26	Romania	0,1566	2
13	Czech Republic	0,4379	1	27	Greece	0,1216	5
14	Malta	0,3982	2	28	Bulgaria	-0,0482	2

Source: Authors work

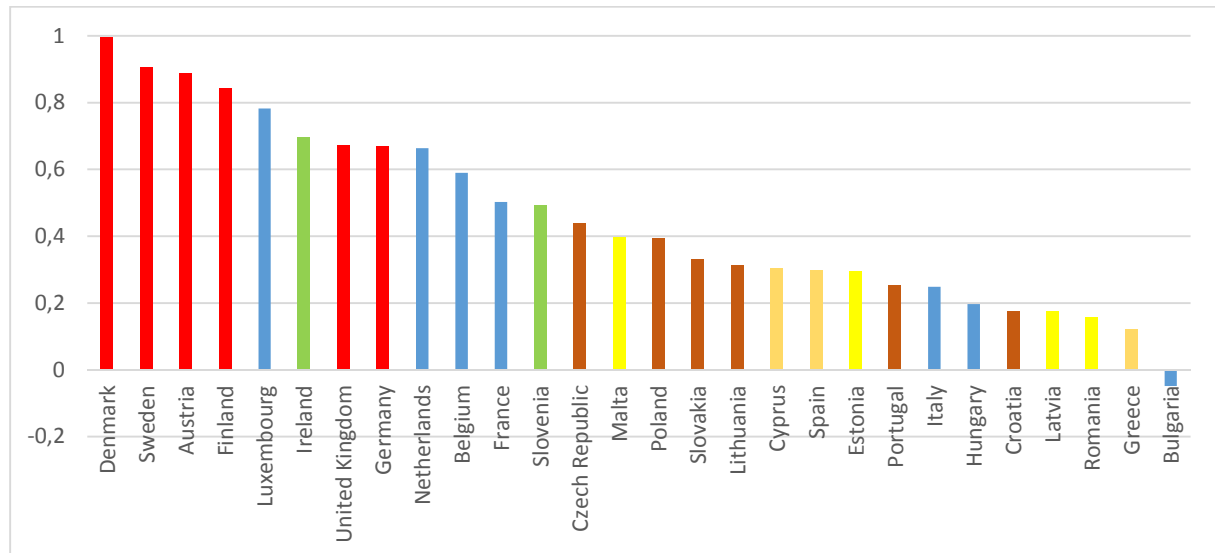
The highest standard of living enjoys people living in Denmark from Cluster 3. This country gained an unusually high value of the standard of living index (0.9968). The second country by the standard of living is Sweden with index value of 0.91. The third best country is Austria with index value of 0.89. The smallest differences are between Germany and the United Kingdom where the index value of the United Kingdom is only 0.0014 points smaller than in Germany, and between Latvia and Croatia where the index value of Latvia is also only 0.0014 points smaller than in Croatia.

The top ten countries mostly belong to Cluster 3. Also, countries from Cluster 4 and 6 have their representations in the top ten. The Cluster 5 countries, namely Spain, Cyprus and Greece are positioned very strangely as Greece is the second country from the bottom with the lowest standard of living though the difference which separates Greece from Bulgaria is quite large, representing 0.17 points. The other countries from Cluster 5, Cyprus and Spain, are situated on the 18th and 19th position respectively. Another interesting phenomenon is Italy from Cluster

4. All the countries from this cluster belong to the first eleven countries, while Italy is positioned on the 22nd place.

Bulgaria represents the country of EU with the lowest standard of living with value of the standard of living index equal only to -0.05, followed by Greece as mentioned above and Romania with index value 0.16.

Figure 2: Standard of living Index



As we can see in Figure 2, Denmark represents the country with the highest standard of living. The difference between the first country and the second country is quite high. The United Kingdom, Germany and Netherlands seem to be at the almost same level of the standard of living. The values of their index are 0.67, 0.67 and 0.66 respectively. Moreover, France and Slovenia tend to be at the very similar standard of living level as their index values are 0.5 and 0.49 respectively. Such is Malta with Poland, Lithuania with Cyprus, Spain and Estonia, Portugal with Italy or Croatia and Latvia.

The standard of living was assessed not merely on economic indicators, but also other indicators and indices were used to construct it. Because the standard of living is influenced by every aspect of people's lives, the index is more credible if many multidimensional variables compose it. Some of the countries are very good in the economic field, but can lack environmental protection and healthcare systems. For example, Bulgaria reaches the lowest values from almost all indicators. What is remarkable though is that Bulgaria is the fourth best country regarding the environmental index. This can be caused by the fact that only 27.4 % of the total GDP production is produced by industry (The Central Intelligence Agency, 2015). Moreover, Bulgaria belong to average European countries regarding the unemployment rate (6.9 %). In addition, though Denmark is considered the country with the highest standard of living, the value of the health index is quite low, only 0.56. The life expectancy in Denmark is 80.1 years, while the number of healthy life years is only 59 years in Denmark. The infant mortality rate in Denmark belong to average EU countries as 3.5 children within 1 year of age die out of 1 000 live births.

Nevertheless, also Luxembourg is a special country, because it has the highest GDP per capita from all the EU member states. The value of the real GDP per capita is 78 200 EUR, while the second-best country regarding the GDP (Denmark) receives only 43 700 EUR per capita. Luxembourg therefore represents an outlier. Although it reaches so high values of the GDP it

is not the country with the highest standard of living. Luxembourg lacks trust in state and political institutions or its people are not satisfied with their relationships. Moreover, the environmental situation in Luxembourg belong to the worst half of the EU countries. Luxembourg is the country that uses the least of renewable energy in its final consumption from the whole EU. Moreover, it invests only 0.7 % of GDP into environmental protection. In addition, Luxembourg is the second country that has the most polluted air in the EU. And the fourth country that releases the highest amounts of emissions into air. Therefore, Luxembourg could not be the country with the highest standard of living, though its GDP per capita was so high.

4. Conclusion

In the first part of the proposed paper was countries sorted into groups by their standard of living. Eventually, the clusters were composed as follows:

- Cluster 1 was formed of Croatia, the Czech Republic, Lithuania, Poland, Portugal and Slovak Republic,
- Cluster 2 involved Bulgaria, Estonia, Hungary, Latvia, Malta and Romania,
- Cluster 3 encompassed Austria, Denmark, Finland, Germany, Sweden and the United Kingdom,
- Cluster 4 was formed of Belgium, France, Italy, Luxembourg and Netherlands,
- Cluster 5 included Cyprus, Greece and Spain and
- Cluster 6 was created from Ireland and Slovenia.

The next part of the paper was oriented on examination and comparison of these clusters. The clusters were analyzed from the point of view of most of the variables and sometimes the results were differing for each variable. However, a certain pattern could be found in the analyses. Cluster 3 and 4 represented by western and southern European countries usually achieved positive values in terms of the standard of living. On the other hand, Cluster 1 and 2 obtained just the opposite values, usually situated at the bottom of the Europe. From those two, the Cluster 2 achieved even lower scores of the variables connected with the standard of living.

In the final part, the countries were ranked by the index which represents level of their standard of living. Denmark achieved the highest value of the standard of living index and therefore could be marked as the country with the highest standard of living. its inhabitants. Denmark was followed by Sweden and Austria. On the other side, Bulgaria represented the country with the lowest standard of living, followed by Greece and Romania. These results were like those achieved by analyzing the clusters. The countries of the third and fourth cluster were located at the first places, while the countries from the first and second cluster were forming the bottom of the European Union following their standard of living.

The outcomes of this paper could be summarized as follows: The group of EU countries with the highest standard of living is called Cluster 3. This cluster is formed of Austria, Denmark, Finland, Germany, Sweden and the United Kingdom. These countries which are situated in the north-west of the Europe can be considered to have a similar level of the standard of living. Moreover, from individual countries Denmark is the one with the highest standard of living, followed by Sweden and Austria. On the other hand, the group of countries with the lowest standard of living can be found in Cluster 2 composed of Bulgaria, Estonia, Hungary, Latvia, Malta and Romania, the countries situated mostly in the Eastern Europe. Additionally, Bulgaria is the country of the EU with the lowest standard of living, followed by Greece and Romania. To sum up, the situation of the standard of living in Europe decreases from west to east and from north to south. The lowest standard of living can be found in south-eastern European

countries.

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The importance of digital literacy of young generation as a cornerstone of sustainable regional development in the state

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Abstract

eGovernment is the use of resources and information technology to improve public services for citizens, businesses and society. eGovernment seeks to improve the availability, simplicity, economic performance and overall efficiency of public services and democratic processes in the country. The article deals with the balance of digital skills and abilities of the young population in connection with the use of ICT resources of the current eGovernment as an effective tool of government. Our study presents the results verify the actual digital literacy of students in the first year of university studies, a standardized test of digital skills. Article evaluates the results of testing the digital skills of 75 students in the first year of university studies. Test of the digital skills was used for the general population and specifically reflects the preparedness of young people to use modern information and communication technology in practice. We think that the use of modern tools of e-Government is more or less pointless unless the digital literacy of citizens is not at the level required to know their particular exercise.

Keywords: e-Government, Digital literacy, Information and communication technologies, Sustainability

JEL Classification: I25, I18

1. Introduction

The paper presents a short discourse on some results for the teaching evaluation of selected topics from the perspective of students which form a part of their information education in the previously mentioned study programs. By realization of monitoring, we would like to contribute towards the solving of problems in modernization and optimization of teaching informatics and towards the focus on curriculum content and on requirements that are determined by practice on knowledge of the studied area.

Modern society relies at every step on information technologies. No area of professional or personal life is immune (Gökalp, 2010). The primary objective of allocating disciplines of informatics into economic and managerial study programs is to develop those IT competencies, which are broadly transferable and especially from the ratio of practice to the labour market requirements, i.e. to pursue a profession in a specific area of the economy (Tantall, 2013). Therefore, it is necessary to focus in addition of the qualitative aspect of teaching disciplines of informatics also on the educational content of these disciplines in the relevant sector of study programs (Wing, 2006). We consider that within the statistical analysis of the data, might be

significant also comparison of interested of students reviews in teaching informatics from the perspective of evaluation (difficulty, attractions, popularity) other, non-informatics learning themes forming the basis of their study profiling, as well as decision-making and choosing future occupation.

1.1 Information and communications technology (ICT) in the context of education

ICT refers to all equipment, applications and services that involve communication. It has evolved as one of the major tools for improving education in general and teaching-learning process in particular, at present (Kanvaria, 2012), (Vanderline et al., 2012). Computers and information technology (IT) touch nearly every aspect of modern life. IT enables seamless integration and communication between businesses anywhere in the world (Csorny, 2013), (Lavy, 2011). That's the reason why is so important education at this field. As far as higher education is concerned it has provided better opportunities for learners to construct, acquire, consolidate, share and expand their knowledge (Schreiner, 2004). Job applicants with ICT skills are preferred even if it's not necessary for position. It's kind of benefit which can help them to solve a critical situation faster and make them earn money to survive (Polakovič et al., 2015). Adding a course that examines international perspectives about ICT for teaching and learning would benefit all students no matter their career trajectory, as the issues to be addressed can provide them with critical perspectives within a comparative framework (Perkins, 2011).

In study called Economic Graduates' Skills and Employability (2012) is explained why economics graduates are recruited so often. The majority of respondents (79.6%) mentioned "knowledge and understanding of economics" (Pomorina, 2012). And which skills are more important for economic graduates? Answer on this question is in the same study. Almost all skills and capabilities listed in the survey – such as the ability to work in a team or computer literacy – were considered to be very or rather important when recruiting higher education graduates. In total, between 88% and 98% of respondents ranked these skills as "very" or "rather important".

On the basis of the comparative analysis and application of modern trends of education in this area we want to suggest the optimum development options of informatics competencies of future graduates in accordance with the requirements of the current practice and the labour market (Urbanova et al., 2012). Informatics education must become, along with digital literacy, an obligatory part of general education (Hennyeyová et al., 2010).

Appropriate informatics education enhances human capability in the form of both practical skills, essential for success in all human disciplines, and conceptual benefits, in the form of effective ways of reasoning about the world ("computational thinking"). All workforces across Europe will be dependent on future Informatics education to retain our living standards (Hennyeyová et al., 2013).

2. Data and Methods

Assessment methodology of education in the field of IT disciplines in selected study programs of economic and managerial focus provided by the Faculty of Economics and Management of Slovak Agricultural University in Nitra we found during the screening reviews of students through the evaluation of selected educational topics/issues. For screening reviews of students was used questionnaire. With the development of the questionnaire, we simultaneously elaborated into details implementation and evaluation rules of questionnaire survey as well. The questionnaire was divided into the six areas and contains a total of 153 items. That six areas were:

- Introductory part (identification of gender and age of the respondent and four other items regarding the study focus of the respondent);
- What I want to learn. To what extent is for the student interesting the study of the following topics;
- My future profession. To what extent are defined factors in selecting and deciding about the future choice of profession important for the student;
- What I would like to learn. To what extent are for the student interesting information from those areas;
- My education in computer science. To what extent the students agree respectively disagree with these statements about education in informatics disciplines they previously passed during university studies;
- My professional capability in the context of study profilation. Respondents were asked to choose one of seven alternative answers, with which most agree, or which best describes their opinion.

Specifications of mentioned circuits' assessment were based on an extensive search activities of available domestic and foreign sources on consultation with experts from the solved field of science and not least on personal discussions led in circles of experts who have extensive professional and educational experience in teaching subjects in which is our research focused (Ross et al., 2006). To the process of evaluation was included 146 items. Their rating to each ordinal item, respondents expressed through the five-point Likert scale, i.e. score between 1 to 5 with a median value on submission neutral, emotionally indifferent response assessment.

The reliability of the items was analysed using multidimensional survey techniques to judge the quality/reliability of the measurement procedure (e.g. the questionnaire scale) and to identify suspicious questionnaire items. One of the ways to directly estimate reliability is the Cronbach's Alpha Coefficient

$$\hat{\alpha} = \frac{m}{m-1} \cdot \left(1 - \frac{\sum s_j^2}{s^2} \right) \quad (1)$$

where m is the number of items in the questionnaire, s^2 is the questionnaire scale variance, and s_j^2 is the variance of the j item in the questionnaire (Ribeiro et al., 2010). Estimation of reliability can be calculated also using the average correlative coefficient \bar{r} of the particular items, called the standardized Cronbach's Alpha Coefficient

$$\bar{\alpha} = \frac{m\bar{r}}{1 + (m-1)\bar{r}} \quad (2)$$

where m is number of the items. If both estimations are significantly different, then different items do not have the same variability.

3. Results and Discussion

In the questionnaire part titled What I would like to learn we asked participants to what extent is the relevant teaching topic interesting in content according them and significant for education in the context of their study profiling, or significant for their professional future. Teaching topics were designed from four educational areas, forming part of their study programs, specifically from the field of informatics (items D1 to D22), accounting (items D23 to D32), and management (items D33 to D41) and from the field of finance and currency (items D42 to D48). For this paper we focused on educational area from the field of informatics.

In Table I we present descriptive statistics of the final score of responses from five most positive and most negative items evaluations – teaching topics from the field of informatics, investigated

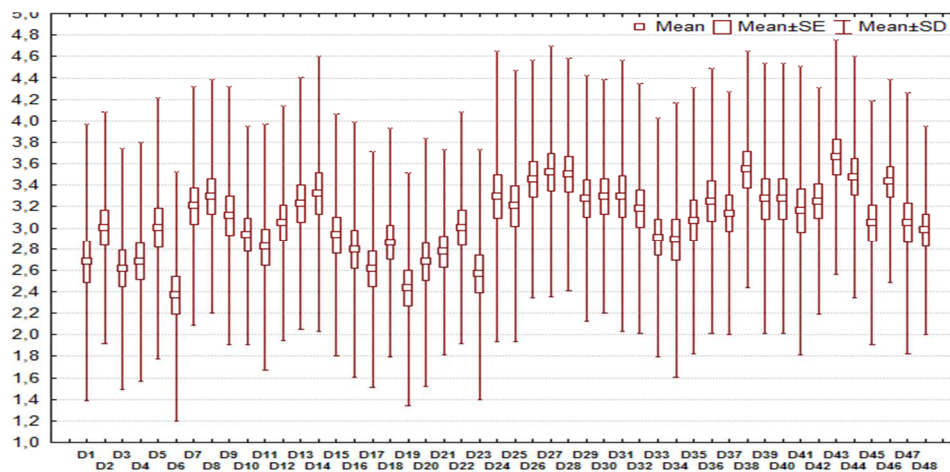
within the area What I would like to learn (5 – very interesting, 4 – rather interesting, 3 – neither interesting, nor uninteresting, 2 – rather uninteresting, 1 – very uninteresting). Indicated are rates of the mean and measures of variability (mean, median, standard deviation, and standard error of the estimate average, lower and upper quartile) score of respondents' answers. In each respondent, there was a recorded scale value in mentioned items of administered questionnaire, depending on what rate of their agreement or disagreement with the individual claims respectively, what degree of positive or negative evaluation of the attractions in individual subjects he/she indicated.

Table 1: From the results of the descriptive statistics of items from the surveyed area D

Surveyed area/Item	Mean	Standard deviation	Standard error	Median	Quartile range	
					Lower Quartile	Upper Quartile
What I would like to learn						
Web applications programming (chat, discussion forum, ecommerce). (D8)	3.407	1.100	0.143	4.000	3.000	4.000
Malware (viruses, Trojans, spyware, adware, hoaxes). (D14)	3.373	1.312	0.171	4.000	3.000	4.000
Programming and Website development. (D7)	3.362	1.119	0.147	4.000	2.000	4.000
Computer network, sharing of equipment and data information transfer. (D9)	3.237	1.165	0.152	3.000	2.000	4.000
Cybercrime (D13)	3.220	1.233	0.160	3.000	2.000	4.000
Using tools of MS Excel for statistical data analysis. (D17)	2.759	1.097	0.144	3.000	2.000	3.000
Working with data in database systems using SQL. (D4)	2.614	1.031	0.137	3.000	2.000	3.000
Creating database applications in database systems Microsoft SQL Server, Oracle or MySQL. (D3)	2.559	1.087	0.142	2.000	2.000	3.000
Advanced work with data through SQL database command. (D19)	2.426	1.092	0.149	2.000	2.000	3.000
Modelling language UML (visualization, design and documentation of software systems). (D6)	2.308	1.147	0.159	2.000	1.000	3.000

Results of the evaluation content measure interesting and significant study themes from the view of students from the area What I would like to learn also summarize Boxplot 1. Boxplot 1 shows the average, standard estimation mean error and standard deviation of the ratings of individual items in that evaluation area.

Figure 1: Boxplot – visualization of differences in ratings of items D1 to D48 of questionnaire



Explanatory notes: D1 – Object-oriented programming (Java, C#, JavaScript, PHP); D2 – Modeling and visualization (animations, simulations) of data; D5 – Design, development and implementation of information systems of companies and organizations; D10 – Application protocols and services on the Internet; D11 – Data encryption, the principle of symmetric and asymmetric encryption; D12 – Computer security, digital signature; D15 – Administration and configuration of the operating system of the Windows platform; D16 – Creating applications in MS Excel using VBA; D18 – Case studies focused on the automation of work with pivot table in MS Excel; D20 – Case studies for the application of macros in the MS Access; D21 – Creating of database applications through programming in Visual Basic for Access; D22 – Safety and optimization of databases.

The lowest value of the standard deviation (0.991), and thus the largest homogeneity in the statements about the interviewed teaching subjects from informatics disciplines was noted in item D21 (Creating of database applications through programming in Visual Basic for Access). Based on the obtained values of quartile range is a 50% value of answers in the scale range 2 (rather uninteresting) to 4 (rather interesting) from the maximum scale value 5. On the contrary, the largest standard deviation, and therefore the greatest variability in the responses of students were noted in item D14 (standard deviation 1.312).

Descriptive characteristics of the research sample of respondents show us the fact, that most positively rated teaching topics from informatics, which were evaluated in that section by the students are in the intentions of used range on the level neither interesting, nor uninteresting to rather interesting. Relatively unexpected findings for us represent the results of the attractions of the course curriculum related to database systems (items D19, D20, D21, and D22). Under essentially unsatisfactory results the score reported by respondents in either of these items can be considered, as it did not reach the median range scale of more than 3.00. Result obtained in these items therefore ranks them in the ranking of the topics with the lowest overall rating in the aspect of the content of interest for interviewed respondents in this part of the questionnaire.

Results of the testing show us the interesting score of responses achieved in items D7 and D8 (median range scale 4.00). Achieved result on the one hand means evaluation of the issues in design and programming websites (D7) and web applications (D8) at level rather interesting, on the other hand, it should be noted that this result of all of the area What I would like to learn delivered of that item front position in the overall evaluation. That finding is also interesting

from the point of view that for higher education graduates, based on generally proclaimed arguments rather user access to computer applications is more predominant.

4. Conclusion

The overall reliability of the questionnaire was calculated by using Cronbach's Alpha. Calculated value for all four areas $\alpha_B = 0.9570$ (What I want to learn), $\alpha_C = 0.8405$ (My future profession), $\alpha_D = 0.9620$ (What I would like to learn) a $\alpha_E = 0.9293$ (My education in computer science) indicates high internal consistency of used measurement instrument. It means, that the application of created research tool allows to obtain reliable data through which can achieve the aim of our research.

Based on results of statistical analysis we are pleased to state, that the application of created research tool allows to obtain reliable data. Findings are also interesting from the point of view that for higher education graduates, whether economic or managerial orientation predominates, based on generally proclaimed arguments rather user access to computer applications is more predominant. Informatics has a strong track record of offering information technology and business management courses for foundation, diploma, undergraduate and postgraduate levels.

Acknowledgements

Detected preferences in opinions reveal several interesting conclusions, which should be necessary to verify also with further research, for example, using interviews, analysis of curriculum documents, social status etc. It is important to continue in this research and improve education content of the subjects especially in the field of informatics subjects. ICT skills we use in everyday life and employers also require a certain level of computer skills in almost any work position and generally all university disciplines today require informatics skills.

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The role of professional burnout in human resources management

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Abstract

This paper takes up the subject of the phenomenon of professional burnout in organizations and their destructive impact on the labor and human resources management. Professional burnout is a worldwide phenomenon which is a result of stress, employee's demotivation as well as wrong employees' management. Professional burnout, its concepts, causes and consequences are defined and presented in the article. The aim of the article is to present the effects of the burnout on the employee and, consequently, on the organization as a whole on the basis of an empirical study. The paper also presents ways of counteracting this phenomenon. The article is of theoretical-empirical nature.

Keywords: professional burnout, human resources management, stress, organization,

JEL Classification: M54, L60, J51

1. Introduction

Professional burnout (called a twenty first century disease) is like stress, mobbing or harassment an organizational pathology which weakens the employee, deprives him of job satisfaction, frustrates and may lead to serious illness such as neurosis, depression, heart disease, stomach ulcers e.t.c.) and even to depersonalization. A "burnout", quite common worldwide, affects every fourth Pole according to the statistic data, and it is caused by working under pressure of time and under stress. The phenomenon of professional burnout was initially associated with the employee's response to stress at work caused by poor interpersonal contacts. Researchers of burnout in the 70s of the twentieth century associated it with occupational groups providing assistance and support for other people, such as paramedics, nurses, carers, volunteers.

Currently, based on a series of studies it has been found that professional burnout phenomenon affects all occupational groups and particularly vulnerable are occupations involving contact with other people, especially stressful occupations (like doctor, journalist, firefighter, spokesperson, teacher, trainer, trader) and the executives who are at a career breakthrough (e.g. promotion). The phenomenon of professional burnout can affect any person (a woman, a man, people of different length of work experience, education, worldview), depending mainly on psychological predispositions, working environment as well as internal and external environment. It often happens that people affected by this phenomenon are former workaholics deeply involved in their work, alternatively their work has been monotonous, routine job, and has led to a state of weariness and indifference. It is crucial to diagnose this phenomenon early and to counteract it.

2. The concepts of professional burnout

Various concepts of professional burnout were presented in the table 1.

Table 1: Concepts of professional burnout

AUTHOR	NAME, DESCRIPTION OF CONCEPT MODEL
Christina Maslach	MULTIDIMENSIONAL (TERNARY) BURNOUT MODEL * emotional exhaustion, *depersonalization, * low sense of achievement
AyalaMalachPines	EGSISTENTIAL PERSPECTIVE Loss of need for sense of life, decrease of sense of self-competence „When people try to find the meaning of their lives at work and they have a feeling that they have failed, the result is burnout” (Pines 2000: 32) Motives which guide people in choosing a profession : 1/general- achieve the dream success, be appreciated, enjoy respect, esteem, 2/specific to the profession- to be needed by others, to help, to influence people’s decisions, 3/personal- own self-realization. ” (Pines 2000: 64) PSYCHODYNAMIC PERSPECTIVE High level of commitment leads to the solution of the problem of childhood issues, whereas career success is supposed to heal childhood wounds from the past. Unfortunately, when the professional activity is not satisfactory, it does not lead to success, it rather leads to trauma, which turns into professional burnout.
Halina Sęk	MULTIDIMENSIONAL EXPLANATORY MODEL The model is based on the theories of stress, of dealing with it, and on mechanisms that control an individual's resistance to stress. The choice of strategy, the way of dealing with stress mainly depends on the assessment made by an individual and sense of remedial competence. This condition can affect the professional burnout

Source: Author’s own work on basis of H. Sęk

1. The process of professional burnout

A syndrome of professional burnout is a psychological condition of an individual caused by the demands of life and an insufficient ability to bear them (imbalance). It is a process conditioned by the individual abilities and skills of managing own strengths. Professional burnout leads to the situation in which all the psychic energy of an individual is used to sustain existence, leading to extreme exhaustion with what he does not only in his professional work, but also with his whole life. The disease develops slowly.

The first symptoms are rarely recognized or even if they are recognized, they are misinterpreted. Attitudes typical of people at risk of this disease are (Litzke, Schuch 2007:168-171): engaging emotionally in work, excessive expectations, exceeding own limits of workload, ignoring and postponing realization of personal needs and interests, willingly accepting additional tasks and responsibilities. The professional burnout process consists of different stages, as shown in Table 2 (Litzke, Schuch 2007:168-171).

Table 2: Stages of professional burnout process.

STAGE	CHARATERISTIC
Stage 1. obligation to constantly prove own worth	The desire to perform work effectively changes into absolute coercion of work due to the excessively high expectations. The time in which it is difficult to see if the limit of own possibilities are exceeded.
Stage 2. Increased	Intense urge to do everything on your own. Conviction that it will be

engagement in performed tasks	better and faster.
Stage 3. Neglecting personal needs	The social life becomes less important and with time there is no willingness to be with others. Alcohol and other drugs are used. Sleep disorders occur.
Stage 4. Misrecognition of border between internal needs and external requirements	Big waste of energy, later exhaustion.
Stage 5. Revalidation and altered perception.	Change of own priorities, perception of social contacts as not relevant, as a burden.
Stage 6. The effect of denial in relation to the surrounding problems	This results in isolation, the person becomes cynical, impatient, intolerant. There is a significant decrease in work efficiency as well as physical fatigue. An individual at this stage needs help from a professional.
Stage 7. Withdrawal stage	An individual perceives a social network as his enemy. He becomes confused, loses any hope for the nearest future. An individual looks for comfort in alcohol, medicines and even drugs
Stage 8.	Noticeable antisocial changes in behavior.
Stage 9. The loss of sense of own personality	He does not recognize himself as an individual having its own autonomy. Functioning on the principle of automation.
Stage 10. The feeling of internal emptiness	An individual completely discouraged and empty, experiencing panic attacks, phobia or fear of people.
Stage 11. Depression state, the state of general exhaustion	Continuous feeling of pain, even first suicidal thoughts occur.
Stage 12.	Full-symptoms of burnout. In addition to all previous effects, the individual becomes susceptible to infections, prone to illness.

Source: Author's own work based on Şek 2004.

3. Causes of professional burnout

Individuals with certain personality traits are more prone to professional burnout. "The possibility of occurrence of this phenomenon unfortunately increases when an individual ceases to believe in own strength and in own capacity, and begins to avoid difficult situations; the individual is too firmly convinced of his or her strength in the organization and thinks that too much depends on him or her alone "(Litzke, Schuch 2007:36).

Causes of burnout can also be found in constant contact with people expecting support. It often happens that the occupation (engaging in other people's issues, empathy) can cause burnout. "This is a situation in which the image of the received world is distorted, the fixed order is ruined, the loss of stability appears. As a consequence, a professional burnout occurs." "(Litzke, Schuch 2007:58-62)

The second group of described interpersonal factors includes: contacts of superiors and co-workers, where stressful situations often occur, such as conflicts, communication disorders or mobbing ".(Litzke, Schuch 2007:58-62)

Another group is organizational factors such as: working environment, the way of performing work, professional development, excess of duties, overtime working time, style of management. Professional burnout is the result of work; the employee is stuck in routine of duties without possibility of leaving an individual mark. (Şek 2004: 36-37)

According to Schmidbauer, burnout is influenced by the work environment. The author mentions the employee's lack of information about his or her working conditions, the constraints of time in which he or she has to complete the task, apathy, lack of assistance from others, monotonous work, routine, "not getting along" with the superiors and bureaucratization. Watkins believes that this set should also include the squandering of psychological and physical resources. As well as physical and too high expectations towards oneself and your own skills and high expectations of oneself and own abilities (Fengler 2001: 6-12)

Whether or not a professional burnout happens to an employee depends on the correlation of environmental and personal factors, such as over-demanding attitude in a situation where there is no chance of influencing the course of events, behavior contrary to own value system, excess of extreme behavior such as aggression or submission, wishful interpretation of events, stoppage in career development, exaggerated perfectionism and over responsibility, excessive rationalization, the problem in separating working time from private time, neglecting personal affairs, poor hygiene, lack of proper diet, bad sleep, lack of proper rest, defensive attitude towards encountered difficulties. Signals indicating that the situation is a burnout case include: suicidal thoughts, loneliness, isolation, lack of job satisfaction, feeling of overwork, negative life perception, susceptibility to illness, antipathy and negative attitude towards customers, exasperation, irritability in the sphere of family matters (Fengler 2001: 6-12).

4. The consequences of Professional burnout in the context of human resources management

Professional burnout is most often defined as a physical, spiritual, or emotional exhaustion. The symptoms have a tremendous impact on professional life, leisure time, relationship with friends, partnerships and the functioning of an individual in the family. According to E. Aronson, "a burnout is a physical, emotional and mental exhaustion caused by long-term involvement in situations that are emotionally charged." In human resources management a professional burnout is a significant problem, it disrupts the functioning of an organization and brings a loss. Table 3 shows the sources of a burnout in an organization.

Table 3: Sources of professional burnout in an organization.

SOURCES OF PROFESSIONAL BURNOUT IN AN ORGANIZATION	SITUATIONS
Interpersonal sources	Superior-subordinate relationships: Interpersonal conflicts, rivalry, lack of mutual trust, disturbed communication, psychological violence, verbal aggression, mobbing, intentional or involuntary contribution of employer to lowering employee's self esteem and employee's self-efficacy.
Organizational factors	The system of orders and prohibitions for the employee, the scope of expectations and the way they are communicated become a source of stress, excess of duties, too high requirements, lack of means of work; Contradictory requirements for the employee, the objectives of the institution are contradictory to the values and standards recognized by the employee; Unclear, inaccurate, distorted information for the employee.

Stressors connected with physical environment	Noise, congestion, poorly matched office equipment or lack of equipment
Stressors connected with ways of performing work	Haste, monotony, irregularity of work (e.g. frequent accumulations of work), work in the evening or at night
Stressors connected with employee's functioning as a member of an organization	Responsibility for objects and people, lack of participation in decision-making, lack of ability to express own opinion on matters relevant to the organization
Stressors connected with professional development	Dissatisfaction with the career path, lack of opportunity for further professional development, lack of sense of permanence of work
Stressors connected with simultaneous functioning in and out of an organization	The inability to accommodate work obligations with family responsibilities, friends or the development of own non-professional interests;

Source: Author's own work based on Loboda 1990.

5. Professional burnout on the basis of the empirical studies

The empirical research was conducted in 2016 in one of the cinemas that belongs to the worldwide network of CC cinemas. An anonymous internet survey was conducted. In the cinemas mostly young people between the age of 20 and 30, mainly students (contract work) are hired to serve customers. The study covered 31 employees. The research group was about 50% of staff (no supervisors and managers). What is more, 71% of the respondents were women, 29% were men, more than 80% of the people surveyed were students. It is worth noting that the rotation of work in this network is very large, despite the flexible schedule of work, after a few months of work the first symptoms of burnout appear. The first question asked by respondents concerned the occurrence of physical symptoms of professional burnout, which were noted by the respondents. Respondents noted several symptoms which are presented in the table 4.

Table 4. Symptoms of professional burnout

Symptoms of professional burnout	Answers of respondents	
	Women	Men
weariness and apathy	13	7
drowsiness and lack of motivation	15	10
irritability and aggression	20	11
other.	0	0

Source: Author's own work

When analyzing respondents' responses, in both men's and women's symptoms the irritability and aggression predominate. The majority of women complain of back pain and headaches (working in dark rooms, at the computer, under stress, under the "watchful eye" of supervisors - monitoring, high speed of work, unjustified dismissal, penalties for lack of availability). The physical symptoms of burnout, however, are not sufficient evidence of a diagnosis of burnout, but they should be regarded as the first warning signal of disturbing changes among workers. Emotional state of workers is another feature that may indicate the possibility of professional

burnout. Answers to questions related to emotional symptoms of professional burnout are presented in Table 5.

Table 5: Emotional symptoms of professional burnout.

Emotional symptoms of professional burnout	Answers of the respondents	
	Women	Men
stress and thinking disorders	17	12
concentration problems	19	9
memory problems	8	15
loss of sense of risk	4	7
loss of sense of responsibility	3	5
other.	Lack of perspectives for the future and promotion, temporary nature of work, work rotation,	Insecurity of work, demotivation, „labor camp”, depersonalization

Source: Author's own work

The majority of the interviewed women experience problems with concentration and memory problems. Another mentioned symptoms were disorders in thinking, loss of sense of risk, loss of sense of responsibility. Likewise, men have problems with concentration, they feel loss of sense of risk and loss of sense of responsibility, thinking disorders, memory problems. The system, the pace of work causes that evident emotional burnout symptoms appear among young people. They claim to feel like they were in a labor camp, even having a long conversation with a customer who sells a ticket to a movie or popcorn can be the reason for a day off. Students must be available also during the exam session, they cannot benefit from sick leave in the event of sickness because this form of contract does not provide such benefits. Working in this network burns young workers already at the beginning of their careers. There is no place for friendship and integration, with such big rotation. Workers appear and disappear, no one knows whether they are still working or not. Table 6 shows respondents' responses to the consequences of emotional burnout.

Table 6: Emotional symptoms of professional burnout – consequences

Emotional symptoms of professional burnout – consequences	Answers of the respondents	
	Women	Men
Alcohol	8	12
Drugs	2	12
psychological help	1	0
interests and hobby	13	8
relieving tension on other people/objects	17	18

Other	- drinking alcohol to calm down -listening to music to relax -smoking	-running, exercise in the gym -making models -doing puzzles
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Source: Author's own work

Eight respondents claimed that they sometimes drink alcohol to relieve stress from work and twelve men responded similarly. Most respondents admit that they rarely or often feel dissatisfied with their work and are deprived of the illusion of being able to make changes. Research shows that women show greater dissatisfaction with work, but are afraid of change. The system of working in this network and bad relationships at the workplace are one of the main factors causing professional burnout. Interactions that people engage into are not limited to relationships at work. Relationships with relatives, family or friends can also have a big impact on the occurrence of the burnout. Research shows that the reasons for professional burnout should be found at the organizational level, where the factors that people face in the organization are. Work is a very important area of human life. Often enough it determines the subjective assessment of quality of life or human health of an individual. Professional burnout is therefore recognized as particularly dangerous to an individual.

6. Summary and conclusions

The piece of research presented above refutes the thesis that professional burnout is experienced by middle-aged workers of long work experience. Corporations, large networks employing certain personnel policy employ young workers and burn them out early in their careers. Negative effects of burnout may, however, spread to other non-occupational spheres of life (eg family problems, illness, alcohol, drugs). The phenomenon of burnout causes huge waste of education and talent of many employees. Literary analysis and empirical studies show that professional burnout causes low quality work, ineffective work, and becomes counterproductive. The cost of professional burnout is borne by all citizens, even if burnout is not directly their problem.

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Management of young workers - conditions related to the expectations of generation Y

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Abstract

Among the various factors affecting the management of diversified human capital of modern organizations special attention should be paid on problems related to the age of employees. The fact there are more and more representatives of young workers from generation Y appearing on the labour market makes employers recognize and take into account their expectations and needs when managing the staff. Elaborations available in the literature on the subject indicate that generation Y is different from earlier generations in terms of mentality, perception of the world and of themselves and the way they work and the sense of achievement. This raises certain problems for the managers.

The aim of the paper is to present the problems of management of young workers in relation to the conditions related to the expectations of the representatives of generation Y. The article is based on a review of the literature, reports and the author own research. The empirical part contains results of carried out surveys by means of which the opinions of the representatives of the generation Y concerning their expectations associated with their professional work.

Keywords: generation Y, generational diversity, management of young workers

JEL Classification: J 53, J 6, J5

1. Introduction

Contemporary organizations increasingly see the need to manage a diverse work environment. Diversity management is an approach to personnel management that exploits the potential that exists in differences. These are all the organization's activities aiming at optimal use of the various characteristics of employees in the workplace. Age management it is a way of managing which generally takes into account the age diversity of employees. The basis of age management is to create such working conditions that every worker, regardless of age, feels good. It is connected with various activities that allow to the efficient use of human resources in enterprises by taking into account the needs and capabilities of employees of all ages (Hysa, 2016). Assumedly it has to lead to maximize the utilization of the potential and competencies of all employees.

The fact there are more and more representatives of young workers from generation Y appearing on the labour market makes employers recognize and take into account their expectations and needs when managing the staff. Attracting these workers, actions tailored to support their commitment to work and keeping them in a company constitute challenges persons managing contemporary organizations have to face.

Special attention is drawn by a specific category of young people who are students ending their education at higher schools and their situation encourages research. After many years of studies they are about to confront their ideas and plans for their professional future with the reality of the labour market.

The aim of the paper is to present the problems of management of young workers in relation to the conditions related to the expectations of the representatives of generation Y with the particular emphasis on flexible employment, working time, balancing professional and personal life. The empirical part contains results of carried out surveys by means of which the opinions of the representatives of the generation Y concerning their expectations associated with their professional work are analysed. The presentation of author's own research results is preceded by the presentation of key terms connected with this issue. That is why the main features of the generation Y are briefly described.

2. Characteristics of the generation Y

Elaborations available in the literature on the subject indicate that generation Y is different from earlier generations in terms of mentality, perception of the world and of themselves and the way they work and the sense of achievement (Pink, 2009; Reisenwitz & Iyer 2009; Hardey, 2011). Although researchers do not agree about the date of birth of their representatives it is often assumed that they are people born after the year 1980. The fact that they grew up in a specific environment had an impact on the values they follow and their expectations as to the reality that surrounds them. On the one hand personal and affiliate values (happiness, love, friendship, family life), and on the other hand work treated as a condition for successful life and source of satisfaction constitute pillars of the internal world of the representatives of generation Y. Representatives of generation Y are associated with higher flexibility and bigger openness to change, readiness to learn and reluctance to long-term commitments and these features are believed to be connected with the necessity to adapt to a rapidly changing environment.

It is emphasised that for workers from this age category such issues as the choice, options and flexibility - relating to work, financial issues and living conditions are very important. Changes and diversity are regarded by them as particularly important in every aspect of functioning. They are very willing to change their place of employment and to take up a job in a company that ensures them friendly atmosphere and the possibility to realise their own plans connected with self-development.

Representatives of the generation Y are educated, they know foreign languages and new technologies. At work they are characterised by their ease of functioning in multicultural environment, establishing cooperation and team actions and the need for close contact and the feedback from their superiors (Randak-Jezierska, 2017).

What is important despite high expectations concerning the remuneration and appreciation of the results of their work, representatives of the generation Y to a greater extent than other generations pay attention to the conditions and to the process of achieving success and are less willing to sacrifice other spheres of life in favour of work (Broadbridge, Maxwell & Ogden, 2007). Because of the fact that their professional work is not the only source of satisfaction for them, they desire to spend their free time realising their own hobbies (Tyler, 2007). As they do not want to feel limited by their work, they appreciate employers with flexible approach to working hours, thanks to whom they will be able to reconcile professional and personal life (Robak, 2014). The importance of relations with the family and with people they are close to and the realisation of their own passions cause that they particularly appreciate the balance between work and other spheres of life (Robak & Słocińska, 2015; Robak, Słocińska & Depta, 2016).

3. Data and Methods

Last semesters of university studies are specific for students who make decisions about their specialisations and start to crystallise their professional careers then. The perspective of

entering the labour market provokes reflection on the future work and also on the experience they have already gained at paid jobs during their studies.

The carried out research being strictly connected with issues of entering the labour market by generation Y aimed to analyse the opinion of students on their expectations connected with their professional future. That is why the issues under research referred to the following questions:

- What are respondents' expectations for their professional future?
- Have the respondents worked during their studies and, if so, what kind of work did they do?
- What do the respondents think about flexible employment?
- What are the expectations of the respondents regarding the possibility of using the telephone, the Internet in non-work matters?
- What do the respondents think about working overtime?
- How important is it for the respondents to maintain the balance between work and personal life after they start their jobs?
- How do the respondents evaluate the possibility of achieving the balance between professional life and successful personal life?

In order to gain the answers to the above questions the methods of diagnostic survey and of a questionnaire with the use of the anonymous auditorium questionnaire were applied. 183 correctly completed questionnaires were selected from all the received surveys and they constituted the basis for the analysis presented in this paper. The research material under analysis was obtained through surveys in January 2017.

Data obtained from 183 students of full-time courses and extramural courses of Czestochowa University of Technology were used in the analysis of the carried out surveys. There were 56 women and 127 men at the age from 22 to 32 among the respondents. All the respondents were from the second-cycle degree and they already possessed diplomas of engineering and of the first-cycle degree programme completion. They studied at the faculty of Mechanical Engineering and Computer Science (147 persons) and at the Faculty of Management (36 persons) on 5 fields (Mathematics, Power engineering, Mechanical engineering, Computer sciences, Management) and 10 specialisations.

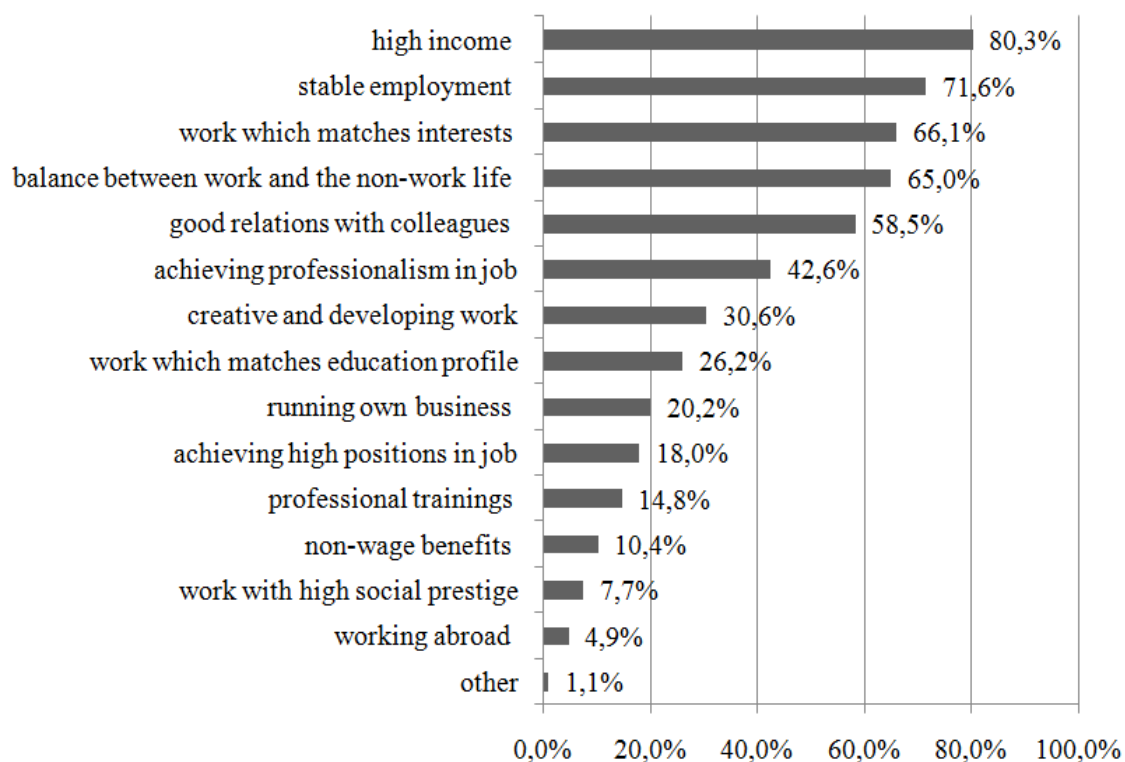
90,7% of respondents took up a paid job already during their studies. It means that very many students, including those from full-time programmes can boast professional experience in front of their future employees which fact significantly increases their chances on the labour market (Vinogradov, 2017). However only 45,2% of them specified the carried out work as matching the profile of their education (mainly students of Computer Science and Mechanics and Machine Construction) Students who took up paid jobs were most often employed on the basis of the contract of specific work/contract of mandate (53,6%) and employment contract (27,1%) and the others (19,3%) worked without any official agreement with the employer. Most of people who declared they worked and studied at the same time (54,8%) stated that their job was not connected with their education profile (trade, gastronomy, giving private lessons, construction and renovation services, work in agriculture and gardening) and it mainly gave financial benefits and not professional practice.

4. Results and Discussion

The main question of the survey, from the point of view of the analysed problems, concern students' expectations connected with their future careers. Each respondent could choose the

answer from a selection of suggestions or indicate his or her own one. High income most of respondents look forward to (80,3% of answers) was at the first place. Professional work is to be based on stable employment (71,6% of answers) that matches their interests (66,1% of answers). What is very interesting, maintaining the balance between work and the non-work life was indicated by a little less respondents (65% of answers). It means that young people who are about to enter the labour market want to have well paid jobs but not at the expense of time for them and their families. Respondents are also interested in having good relations with colleagues in the future (58,5% of answers), and in achieving professionalism in their jobs (42,6% of answers) and also in carrying out creative and developing work (30,6% of answers). Respondents paid less attention to the fact if their employment matches their education profile, or not (26,2%) and to achieving high positions in their jobs (18% of answers). Professional trainings (14,8% of answers) and non-wage benefits (10,4%) did not receive so much recognition by respondents. While every fifth respondent took into account running his own business (20,2%) in the future. Only some of the students under research were interested in working abroad (4,9%) as they believed they would find a well-paid and attractive job in their country (figure 1).

Figure 1: Expectations of the respondents concerning the professional future

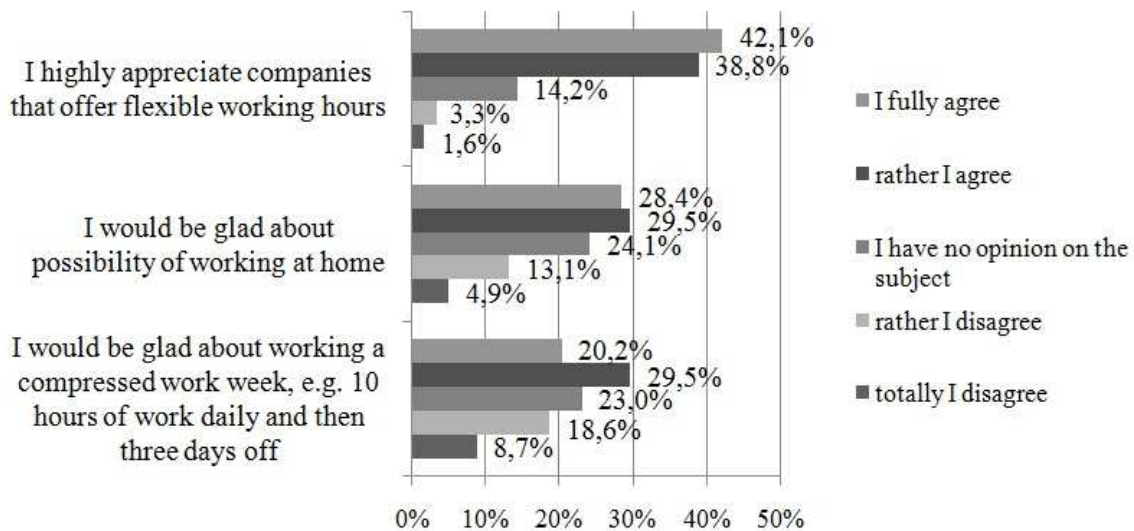


Source: own research

The issue of flexible employment is particularly important in respect of the matter of studied problem. Due to this fact questions revealing opinions on this issue were also used in the questionnaire survey. Respondents answered using a five-point Likert scale. According to the obtained data respondents highly appreciate companies offering flexible working hours, because until 80,1% of them gave positive answers to this issue. Most respondents (59,9% of choices) would appreciate the fact that they could work professionally at home. Almost every second respondent (49,5% choices) would accept work in compressed working week (e.g. 10 hours of work daily and then three days off). However the style of professional functioning also

had numerous opponents (27,3% of checked options). Opinions of the respondents on flexible employment are illustrated on figure 2.

Figure 2: Opinions of the respondents on flexible employment

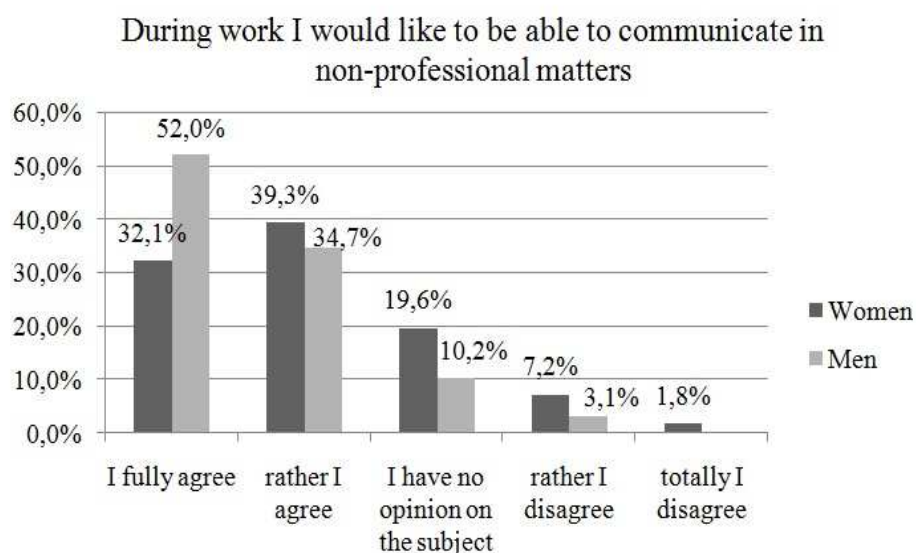


Source: own research

According to the collected information, the surveyed students expect from employers flexible working hours. Flexibility in the workplace for the respondents is also connected with the ability to communicate during work time (telephone, internet) in non-professional matters.

86.7% of the surveyed men and 71.4% of the women wanted to be able to use the telephone and the internet for private purposes during work time (figure 3).

Figure 3: Expectations of the respondents regarding the possibility of using the phone, the internet in non-professional matters, according to sex



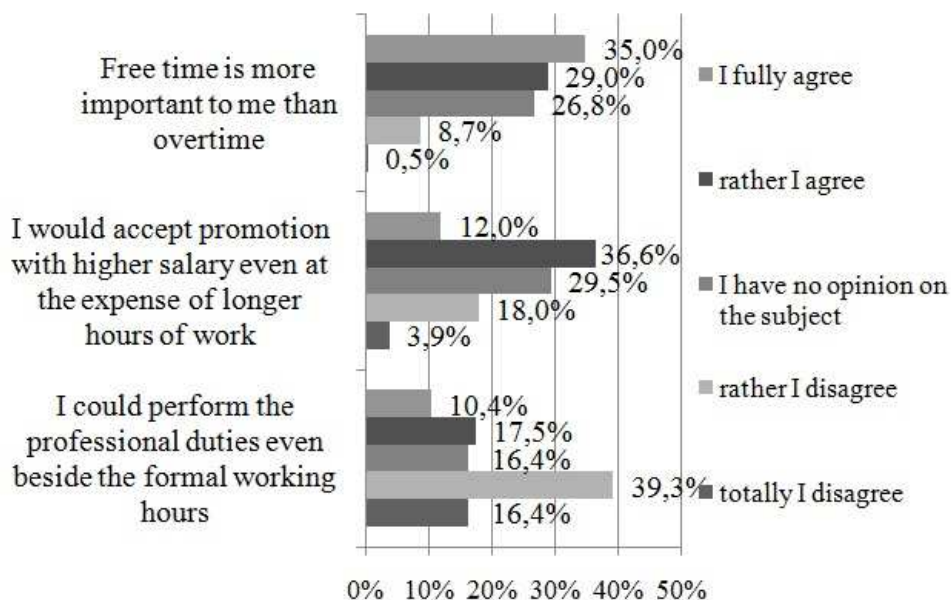
Source: own research

Focusing on the issue of the amount of time the respondents would like to spend on professional work after the graduation, the respondents were asked to address the issue if according to them

the standard 40 hour working week is an appropriate amount of working time. Although 72,1% of respondents confirmed that they want to work for the amount of time, almost every fifth respondent (18%) would like to spend less time on professional career. The least respondents (9,9%) believe that in the future they will spend on their professional work more time than the standard 40 hours per week.

Analysing the opinions of respondents regarding the relation between the time spend on work and that spent outside work a number of questions relating to this important issue were used. When respondents were asked if their free time is more important for them than additional working hours (overtime), most of them marked the answer that they fully agree with it (35% of checked options) or rather agree (29% of checked options). Only 9,2% of respondents were of opposite opinion. However, it should be noted here that every fourth respondent did not have any opinion on this subject. The answers concerning the issue of the acceptance of performing professional duties beyond the official working time also indicate that the respondents attach great importance to personal life. More than half of the respondents (55,7% of checked options) claimed that they do not agree to work professionally during the additional time- over the standard working time. However interestingly, students asked if they would accept the promotion with higher pay if it meant longer hours at work - they were no longer so willing to defend the time for private life. Almost every second respondent (48,6%) would agree to spend the additional time on work if this was connected with promotion to a higher position and higher salaries. Many respondents could not define their position on this issue (29,5%) and 21,9% of respondents would not agree to longer hours at work even if it was connected with promotion. The summary of the received answers concerning the working time and its relation to the time spent outside work is presented in figure 4.

Figure 4: Opinions of respondents on the relation of working time to the time outside work

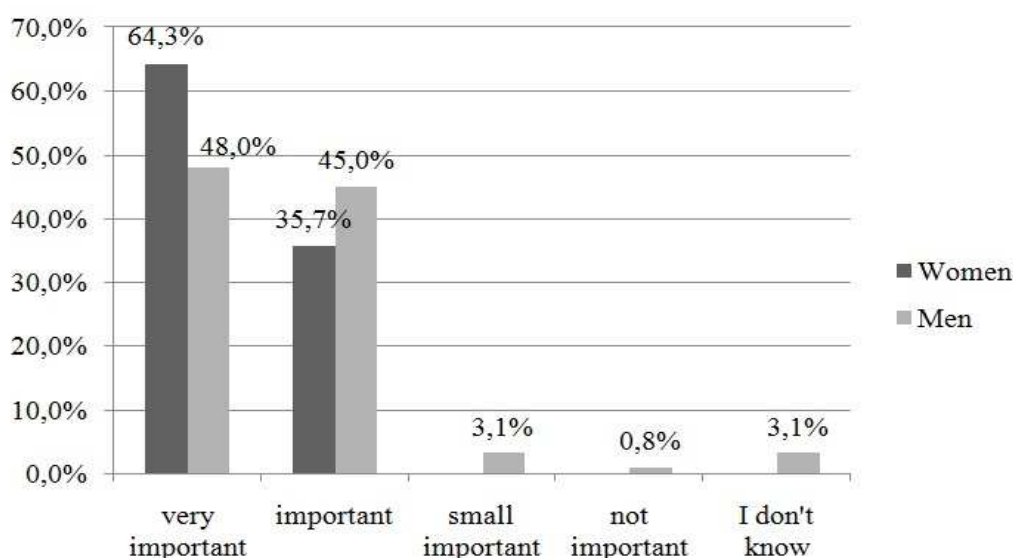


Source: own research

In order to check the significance of work-life balance for generation Y in the questionnaire respondents were asked to address the issue of how important it would be for them to maintain balance between the requirements of work and personal life. The respondents confirmed the thesis that for their generation work-life balance has a significant meaning, as 53% of them stated that it is very important for them and 42,1% indicated it as important (figure 5). It also

turned out in the research that the women who took part in it attached special meaning to the work-life balance, as 64,3% of them evaluated the meaning of this issue as very big and the others as big. Highlighting the importance of this issue by women in the research can mean that they are aware of potential difficulties in fulfilling different roles in life and especially in reconciling family duties and professional ones.

Figure 5: Opinions of respondents on the significance of the balance between work and non-work life according to sex



Source: own research

In the end the respondents were asked how they assess the possibility of striking the balance between work and successful personal life. Respondents turned out to be optimistic on this issue because not less than 96,2% of them believed that they would succeed in balancing these two major spheres of life in the future. The respondents showed lower degree of optimism when asked about the evaluation of their future effectiveness at work and in personal life. Asked if they can be equally effective at work and in private life 80,3% of them gave a positive answer. However, 14,2% of them did not express explicit opinion on this subject and 5,2% expressed their negative opinion on the possibility of being an effective worker and experiencing effective functioning in private life at the same time.

The comparison of presented here information with the results of other studies concerning the opinion of students and graduates of higher schools on their expectations regarding their future jobs show numerous similarities in obtained data. The fourth edition of research made by the consulting company - Deloitte "First steps on the labour market - Leaders of the future" can serve as an example. According to this survey the opportunity of professional development and learning new skills serve as main factors determining the choice of a given job in case of students and young graduates. Next in the order were attractive remuneration, work-life balance and good atmosphere at work. When asked about career plans most respondents answered that they would like to occupy managerial positions in the organizational hierarchy, and only every fourth of them had in mind the highest positions in the hierarchy. However, bad atmosphere at work, insufficient growth opportunities, too low salaries and the lack of appreciation at work were given as main reasons for changing the employer.

Researches and analyses relating to the functioning of generation Y on the labour market shed additional light and complement the issues mentioned in this elaboration (compare Baran &

Kłos, 2014; Karczewska, 2014; Ostasiewicz & Zawadzki, 2016), the content of which was limited by the volume of this paper.

5. Conclusion

As it is clear from the research the expectations of generation Y concerning the professional future mainly refer to high income, stable employment that matches the workers' interests and work-life balance. As employees they want to spend less time on professional life than their parents as free time is more important for them than additional working hours. However, employers may rely on their strong commitment (including extended hours) to the realization of tasks matching their interests and also in case of promotion involving higher salary. The importance the representatives of generation Y attach to balancing work and personal lives has also another aspect connected with high assessment of companies offering flexible working hours. The representatives of generation Y under research believe that they will be able to strike a proper balance between work and successful personal life and function effectively in both key areas of life.

Taking into account the presented results of research and elaborations in the literature on the subject it can be concluded that the commitment to work of the employees from generation Y and preventing them from changing the employer depend not only on the support of their professional development, offering them interesting and well paid employment or good atmosphere in the team but also from enabling them to maintain work-life balance.

However, it should be emphasized that the analysis of the needs of workers through the prism of which generation they belong to, although it provides many valuable information, it is certainly not sufficient. Therefore, to effectively identify individual objectives and preferences of young workers it is necessary to cultivate good relations between workers and their superiors that are based on open communication and trust.

In conclusion, the knowledge about the expectations of generation Y and the good everyday communication will allow managers to make better use of the opportunities and strengths of these young workers and to create a corporate image that is flexible, modern and socially responsible.

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Social work environment impact on employee's counterproductive behaviour

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Abstract

Social work environment, understood as relationships in the workplace is an important determinant of employee behaviour. This issue should be analyzed comprehensively taking into account not only interpersonal relationships but also a management and organizational context. The main objective of this article is the assumption that the social environment influences the occurrence of employees counterproductive behaviour. The paper presents the concept of research relating to the problem analyzed, developed through the method of desk research.

Keywords: social work environment, organizational justice, trust, management style, counterproductive behaviour.

JEL Classification: J28, J81

1. Introduction

Many premises in theory and practice prove, that employee's productiveness is highly dependent on proper work environment (Kaczowska-Serafińska, 2011, pp. 11-16) while any enterprise's success are under influence of the personal values of employees which are shaped by, among others, this environment as well (Korpus, 2006, p. 121). For the organisation it is important to preserve the economic dimension of work and employee, in order to make it perceived through advantages it gains and losses avoided. Moreover, care for work environment constitutes an evidence of personal, approach to the employee (Robak & Słocińska, 2012). Social work environment, seen as a collection of relation expressed at work have significant influence on personnel behaviours. They may adapt positive forms, such as organisational citizenship behaviours (OCB), or opposite to them, counterproductive work behaviours (CWB). Our paper has been based on an assumption, that positive work environment reduce counterproductive behaviours. Positive social work environment is understood here as work relationships based on organisational justice, trust and open management style. This article aim is to propose a research concept explaining work environment social influence on organisational behaviours with particular consideration of counterproductive ones.

2. Theoretical basis of social work environment

The term "work environment" in specialised literature is commonly used, still it lacks precise definition. It is assumed, that work environment consists of a complete set of conditions, which create the place of work. They depend on various material and non – material factors, which may be grouped in following categories: material, technical and organisational work environment, human resource management, social, private or existential, informational work environments (Korpus, 2006, pp. 124-126).

One of the factors' group related to work conditions is social work environment, which is represented by interpersonal relationships, including relations with superiors, methodology of

management and staff participation in the organisation life. Failures in this area may diminish life quality at work, creating stress. They also may reduce satisfaction of work and dedication of the staff, being a part of work attitudes (Bittel, 2002, p. 62; Robbins, 2004, p. 50).

In work environment specific interpersonal relation occurs, aimed at accomplishment of specific tasks. These relations lead to specific social bonds between employees, on social, cultural, organisational and personal grounds. Here we can admit the existence of interdependent relationships (Ratajczak, 2007, pp. 60-61).

Building interpersonal human relationships plays an important role in communication processes, as its efficiency, openness and flow directions. Which is why forming social work environment emphasizes vital role of management, starting from the managing personnel, to immediate superiors (Robak, 2012, pp. 113-121). They, as a professional group with know-how and skills, are responsible for removal of communication barriers and relationships management at work, among others, by developed management style. Managing personnel has also significant influence on such important interpersonal relationships forming factors as organisational justice and trust.

Justice, generally speaking, is associated with honesty. Literature proves, that this is a multidimensional term and refers to different subjects, as: freedom, moral behaviour (Bugdol 2014, p. 30). In order to define employee's behaviour work environment stimulating factors, justice is the most often termed as (Macko 2009, p.40): distributive, procedural, interpersonal, informative and retributive. Organisational justice in management sciences means, that employees are equal in the presence of: existing legal and normative system, accepted and defined management methods, used for professional development (Bugdol 2014, p. 25). Organisational justice requires fair management, which makes personnel feel treated properly, which determines its behaviour in the work environment.

Distributive and procedural justice decide on satisfaction of work, and interpersonal, informational and retributive justices are important for the quality of relationships between all participants.

Justice as one of the organisational values is often treated as a condition for other values, including organisational trust. Trust between organisation members is a factor which influences strongly interpersonal collaboration both, between individual groups of employees and the whole organisation. This coordination, based on trust, makes possible to extend flexibility of actions and favours the organisation development. Forming a network of mutual bonds, the organisational trust facilitates knowledge transfer, performing a supervisory role in the same time. Whenever the mutual trust on individual level extends to the wider circles and become mass, then we can say, that we are dealing with trust environment (Sztompka, 2007, pp. 266-268).

Trust is not gained in a day, it requires long term efforts. It is created with social norms and more or less formal interpersonal relationships. Such understood, trust constitutes a significant indicator of a positive work environment, fuelling personnel's internal collaboration (Kaliński, 2006, pp. 181-182).

3. Citizenship behaviours vs counterproductive behaviours

Social and economic transformations of organisations and their environments led in 80s to a growth of interest of citizenship kinds of organisational behaviours, in science (Greenberg, 1988, pp. 155-157). Literature of that time emphasised positive influence of these kinds of behaviours on satisfaction of work experienced by individual employees (Lai Wan Hooi, 2015,

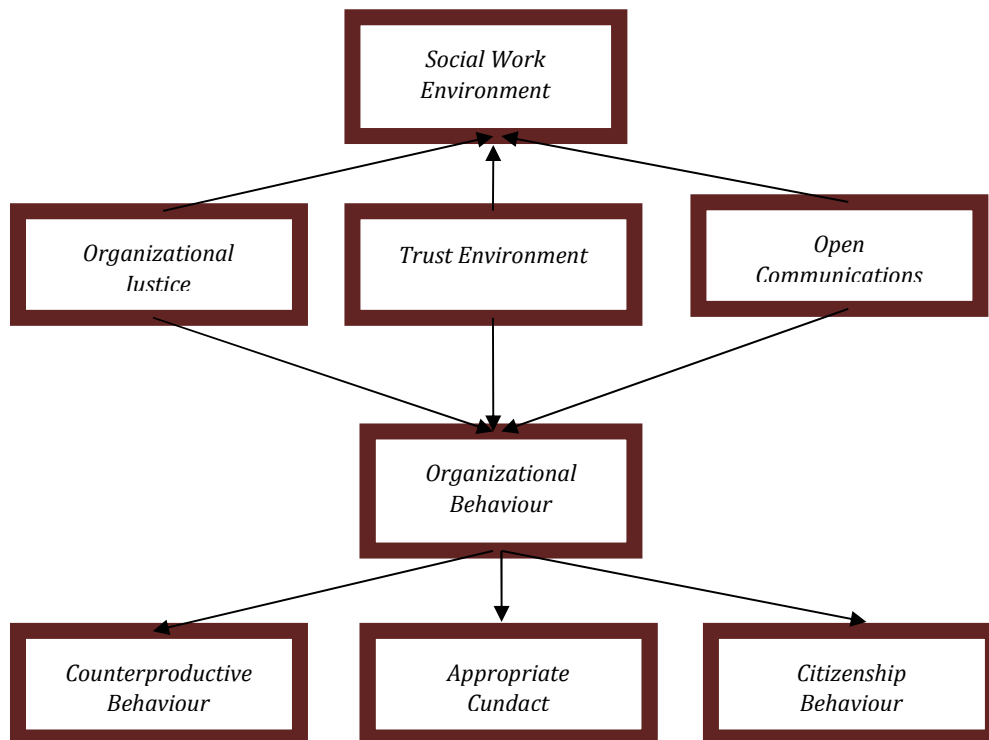
p. 62) development of the whole organisations (Podsakoff & Mackenzie, 1989) and fluctuation reduction (Fassina, Jones & Uggerslev, 2008, pp. 161-188.). The development and present form of organisational citizenship behaviours owes its shape to D. Organ (Organ, 1990, pp.43-72). who was responsible for this definition creation. Now, OCB is mainly defined as a pro-social activity form, expressed voluntarily by an individual towards other co-workers of an organisation (Organ, 1990). These behaviours are mainly spontaneous (Kadar, Khan & Rashid, 2012, pp. 83-91) and directly, or indirectly stimulated by organisational enhancement systems (Elamurugan, Mathiazhagan & Latha, 2015).

OCB have their own alter ego in the literature, the ones decreasing personnel and organisation productiveness, called the counterproductive work behaviours. These behaviours are understood as the ones inflicting organisational norms or compromising the productiveness, which harms the organisation aims, or its participants (Fox, Spector & Miles, 2001, pp. 291–309). The losses generated this way may concern either personnel, or superiors, subordinates and remaining organisation participants, including the customer's interest. The examples of CWB (the most popular ones) are: larceny, destruction of property, hazardous behaviours, information misuse, wasting working time and organisation resources, unjustified leaving the work place, providing work of poor quality, abuse of alcohol and psychoactive substances, or aggressive behaviours (Macko, 2009). An important feature of this kind of behaviours is their intentionality, which means, that an employee makes an independent decision to perform specific behaviour, being aware of its consequences (Fox and Spector, 2005). Different authors (Neuman & Baron, 2005; Gialcone & Greenberg, 1997; Hogan & Hogan 1989, pp. 273-279) define CWB in different way – as reactions harmful for organisation functioning, causing organisational efficiency decrease, understood as productiveness of processes, economic results and social climate of an enterprise.

4. The proposed research methodology

The authors assumed, that work relationships based on organisational justice, trust and open management, stimulate positive social work environment, restricting CWB. Such assumption made them elaborate a model of relations between social environment components and CWB (Fig.1). It has been determined, that quality of social work environment is influenced mainly by organisational justice, trust and management style. While, organisational justice has been defined in the context of subjectively experienced and perceived justice. Experienced justice takes place whenever we find it just for ourselves, which means how the job we do is assessed by ourselves, or how do we find our relationships with co-workers. Perceived justice, however refers to what we know about just treating not only ourselves, but also the other co-workers. The similar way was used to analyse management style, which is assessed subjectively in terms of communication openness between subordinate and superior, and the context of management style in relation to co-workers. The trust, on the other hand, included subjective, emotional aspect connected with relationships between individuals, but also in wider aspect, trust environment.

Figure 1: Model of relations between social work environment and organisational behaviours



Source: own concept

The organisations based on trust, associated with trust environment are featured by (Bibb & Kourdi, 2004, p. 164):

- convincement of collaboration as more profitable activity,
- understanding and support appreciation,
- reaching consensus – reaching higher levels with the help of others,
- justice,
- mutual approval of obligations and flexibility,
- appreciation of mastership, as well as compassion and care for others,
- influence on expertise, respect and understanding – using force only in exceptional situations,
- direct communication with feedback, clarity and transparence,
- creation of interdependence,
- open, long-term relationships,

reduction of unproductive conflicts by collaboration of people with similar values, promotion of mutual understanding, referring to mediation and arbitration.

The abovementioned components of positive social work environment form positive dimension of it, which improves the organisational behaviours of personnel. The research assumed these behaviours, according to following division:

- included solely in duties entrusted to an employee' (Appropriate Cundact),
- non-standard ones, with involvement exceeding formal norms of duties (COB),
- dysfunctional, harming co-workers, or the organisation (CWB).

The main research hypothesis has been considered the fact, that positive social work environment influenced personnel behaviours and restricted CWB occurrence.

5. Conclusion

Social work environment influences structuring mutual commitments networks, which facilitates knowledge transfer as well as control and coordination, reducing need for rigid, formal structures, enabling extended flexibility of actions and organisation development. This also makes possible organisational changes and reorganisation processes, through, among others, reduction of formalisation and control. That's why it seems vital to focus on quality of environment creating factors and resulting employee's behaviours. From the organisation's point of view, it is vital to increase COB frequency as the ones, which stimulate the organisation's development the most. In today's economic reality, which makes pressure on competitiveness, remaining at the level of correct employee's behaviours is insufficient. CWB and their harmfulness should be identified and removed efficiently. In this context, the research proposed research concept seems to have significant cognitive and applicative meaning.

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Selected factors of talent identification and recruitment in integrated talent management process: Case of organisation in Slovak Republic

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Abstract

Talent management should be a key factor of successful company. It integrates several phases from strategy of the company, HR strategy, through identification and recruitment employees, assessment, development, and retaining. This contribution is oriented on the factors of talent identification and recruitment in the company which deals with information and communication technologies in Slovak Republic. A scaled questionnaire was used as a tool for data collection. 432 respondents (employees of the company) were included into this research. We selected gender, age, work position, education level, and worked years as a factors that should influence the perception of identification and recruitment in talent management process. We distribute the questionnaire via online Google documents system. Questionnaire reliability was verified by Cronbach's alpha and reached the level 0.712. Kruskal-Wallis test and Mann-Whitney U test were used to find and verify the existence of statistically significant differences between individual groups of respondents.

Keywords: *identification, talent, ownership, process, recruitment*

JEL Classification: *M10, M12, M54*

1. Introduction

There are many sources in companies which should create competitive advantage but human resources based on talent management can meet sustainable competitive advantage. This should be managed through identification, recruitment, development, and retention of the talented individuals. The talent management practices can increase productivity and reach better economic results. Company with implemented good talent management practices is much oriented to employee's development and allocation right people on right places which leads into success on the market. In this paper, we would like to clarify some relationships between identification and recruitment of talents and selected determinants such a gender, age, work position, level of education, and worked years.

1.1 Talent identification and recruitment as a part of talent management process

Talent management is an interesting topic for academics in recent years, but there are still many questions for further practical and theoretical development (Iles, P. et al., 2010) which resulted into dramatic increase of articles relating to talent management in last years (Chuai, X. et al., 2008). Some authors claim that talent management is not just another fashionable HR term, it is crucial to business success and talent management is often projected to be the next core competency in HR domain expertise (Morton et al., 2005)

The key issue of talent management is to define who the talents. Very broad definition of talent is by Michaels et al. (2001). They define it as the most effective leaders and managers at all levels who can help a company fulfil its aspirations and drive its performance, managerial talent is some combination of a sharp strategic mind, leadership ability, emotional maturity, communications skills, the ability to attract and inspire other talented people, entrepreneurial

instincts, functional skills, and the ability to deliver results. Talents are individuals who demonstrate high potential and key people with high performance (Society for Human Resources Management, 2007). Definition of the talent must be customized to the context of the organization. For example, size of the enterprise is an important factor influencing human resources management (Holátová et al., 2014, Březinová, 2014). Armstrong (2006) highlighted that talent management should not only focus on the high-flyer, but it should be oriented all the assiduous and efficient workers. Sloan et al. (2003) focus on talent strategically, to put the right person in the right place at the right time.

Talent management is defined by Egerová et al. (2015) as a systematic and dynamic process of discovering, developing and sustaining talents. Talent management encompasses managing the supply, demand, and flow of talent through the human capital engine (Pascal, 2004). Fegley (2006) points out that talent management must be an integrated set of HR practices or functions (recruitment, selection, development and performance appraisal) aimed at increasing the capacity of organization. Talent management should be divided into two dimensions (Garrow and Hirsch, 2008). First is focus, which relies on a clear strategy for how talent management will contribute to organizational objectives, what parts of the organization and which job roles will be priorities and where talent pools will be sourced. Second is fit, ensures that talent management processes support the strategic objectives, resonate with but possibly also challenge the organizational culture, take into account the psychological contract between employer and employee and sit well with existing HR processes.

Strategic talent management as activities and processes that involve the systematic identification of key positions which differentially contribute to the organisation's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organisation (Collings and Mellahi, 2009). As stated in Jerusalem and Hausdorf (2007), high potential (talent) identification and development refers to the process by which an organization identifies and develops employees who are potentially able to move into leadership roles sometime in the future. Talent identification is the process where talented individuals are sought and accelerated its progress. Identification is highly connected with recruitment. According to Perrin (2005) there are some factors considered as recruitment drivers: competitive base pay, work/life balance, career advancement opportunities, competitive benefits, challenging work, salary increase linked to the individual performance, learning and development opportunities, competitive retirement benefits, the calibre of co-workers and the reputation of the organization as a good employer.

2. Data and Methods

Methodology used in this paper is described in this section. Selective survey was used as a method for data collection. Questionnaire focused on basic parts of talent management process was used as a tool of data collection. This questionnaire was set up with the consortium of scientific researchers and modified for our research conditions (Egerová et al., 2013). We have chosen 10 items directly aimed to the process of identification and recruitment of talented individuals in the company. Questions about motivation to be an employee in searched company were added to this questionnaire as an important tool to recruit talents. We set up classification items to the questionnaire such gender, age, work position, education level, and experience of respondents measured by number of worked years. These questions should help us to search statistically significant differences. List of the items with marks used in this paper is follow (table 1).

Table 1: List of the items and their marks

I 1	All positions in our company have been divided into key and peripheral positions.
I 2	Talent is sought in every person.
I 3	Special activities aimed at talent recruitment are carried out.
I 4	We are currently identifying talents among all the workers employed in our company.
I 5	Adequate work environment and conditions for the work performance are created.
I 6	Specific procedures to support talented workers are used.
I 7	There are plenty of possibilities for personal development in the company.
I 8	There are plenty of opportunities to support learning in the company.
I 9	The promotion system is based on objective criteria.
I 10	The motivation system is well oriented.

Source: own processing according to questionnaire

We used the questionnaire where item were scaled according to Likert (from 1 to 5), where 1 means absolute disagreement of the respondent, 5 means absolute consensus and figure 3 expressed irresolute attitude of the respondent. The questionnaire was available online via Google system. At the beginning of the research we verified reliability of the questionnaire by means of Cronbach's alpha. The values of Cronbach's alpha higher than 0.7 shows on sufficient scale consistence. Cronbach's alpha was on the level 0.712 for these items.

We used Non-parametric statistical methods to verify the existence of significant differences between the individual groups of respondents. According to Munk (2013) the aim of the test is to find whether the differences of the medians found in the sample of the individual groups are statistically significant (there is a relationship between the variables) or whether these are coincidental (there is no relationship between the variables). We tested it on the 5% level of significance. If the p-value is lower than 0.05 statistically significant difference exist in tested group. Kruskal-Wallis test and Mann-Whitney U test were used in statistical software SPSS for calculations.

The talent management process consists of several phases. The main objective of this research survey was to explore how the identification and recruitment of talented individuals is applied in searched company. The following research questions were developed to achieve this goal:

- What factors influence the perception of talent identification and recruitment in the concept of talent management in this company most significantly?
- Does gender cause differences in applying process of identification and recruitment in talent management in the organization?
- Does age of employees influence the perception of talent identification and recruitment in the company?
- Does work position of respondents make differences in perception of talent identification and recruitment in the company?
- Is respondent's educational level significant factor of talent identification and recruitment in the company?
- Does number of years worked for company cause differences in perception of identification and recruitment in talent management?

3. Results and Discussion

This paper is focused on several important factors which should influence the perception of the talents identification and recruitment in the integrated talent management process. We have selected following determinants: gender, age, work position, education level, and experience of respondents measured by number of worked years. Data were collected in the period from

November 2016 to April 2017. There are 432 companies included into this research. All of them are employees in the company of Eastern Slovak Republic which deals with information and communication technologies. Following tables represents distribution of research sample according to classification criteria.

Table 2: Survey sample

		Frequency	Percent
Gender	Men	262	60.6
	Women	170	39.4
Age	30 and under	182	42.1
	31 – 40	179	41.4
	41 – 55	56	13.0
	56 and more	15	3.5
Work position	IT	247	57.2
	Administration	53	12.3
	Marketing	47	10.9
	Other	85	19.7
Education level	Basic	0	0
	High school	183	42.4
	University	249	57.6
Number of worked years	less than 2	122	28.2
	2 – 5	164	38.0
	6 – 10	126	29.2
	more than 10	20	4.6

Source: own processing

The research sample consists of 432 respondents for searched company. From this number there are 262 men (60.6%) and 170 women (39.4%) included in this research sample according to factor of gender. More than 83% of respondents are 40 or younger. Only 16.5% are older. This numbers shows us that the company more employs younger people and there is big pressure to find talented persons. More than a half of the searched people are working as the IT specialists (57.2%). The reason is highly connected with the company orientation to information and communication technologies. According to education level there are included 57.6% of university educated respondents and 42.4% with finished high school (table 2). The proportion of the sample is well-balanced according to this factor what creates good conditions for finding out the influence of these factors on the identification talents and recruitment in the talent management process.

Answers of respondents in searched items are summarized in following table 3.

Table 3: Answers of respondents

		1	2	3	4	5
I1	Frequency	42	203	58	115	14
	Percent	9.7	47.0	13.4	26.6	3.2
I2	Frequency	20	15	121	222	54
	Percent	4.6	3.5	28.0	51.4	12.5
I3	Frequency	21	16	73	227	95
	Percent	4.9	3.7	16.9	52.5	22.0
I4	Frequency	14	11	68	198	141
	Percent	3.2	2.5	15.7	45.8	32.6
I5	Frequency	32	6	86	184	124
	Percent	7.4	1.4	19.9	42.6	28.7
I6	Frequency	37	104	160	83	48
	Percent	8.6	24.1	37.0	19.2	11.1
I7	Frequency	4	4	71	223	130
	Percent	0.9	0.9	16.4	51.6	30.1
I8	Frequency	2	7	59	220	144
	Percent	0.5	1.6	13.7	50.9	33.3
I9	Frequency	7	47	99	175	104
	Percent	1.6	10.9	22.9	40.5	24.1
I10	Frequency	13	41	108	175	95
	Percent	3.0	9.5	25.0	40.5	22.0

Source: own processing

Then we examined the influence of the factors on the items which deal the phase of talent identification and recruitment.

Table 4: Verification of the differences –gender of the respondents

Item	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
P value	0.638	0.667	0.957	0.195	0.612	0.417	0.111	0.118	0.686	0.606

Source: own processing

Gender of respondents was examined as a first factor. According to our calculations there exist no statistically significant differences in selected items (table 4). Both men and women perceived the process of identification and recruitment in the same way. We assume that impact on talented individuals does not depend on gender of employees. Men and women have equal possibilities to become talent in this company.

Table 5: Verification of the differences – age of the respondents

Item	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
P value	0.375	0.871	0.326	0.559	0.002	0.906	0.322	0.286	0.813	0.566

Source: own processing

Regarding to second factor (age of the respondents) we found one statistically significant difference in item 5 (table 5). We consider that there is difference in this item because older employees are more satisfied with current state of the work environment and conditions for the work performance than younger employees. Younger people have higher expectations for the

work place and possibilities for better carrier than older. We recommend to the management of the company when they would like to recruit and then retain new young talents so they have to prepare adequate work environment for them. This should be high motivation for younger people to be hired.

Table 6: Verification of the differences – work position

Item	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
P value	0.641	0.407	0.959	0.755	0.526	0.227	0.943	0.993	0.930	0.491

Source: own processing

Work position is another factor examined in this research. In this factor we did not find statistically significant differences in answers of respondents according to this determinant (table 6). Although company is focused on information and communication technologies so they needs talented individuals also in other branches like marketing, administration, development. This would be an explanation of this results that people from each branch need similar work conditions to be hired.

Table 7: Verification of the differences – education level

Item	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
P value	0.628	0.177	0.347	0.505	0.911	0.048	0.689	0.134	0.461	0.421

Source: own processing

Education level influences the process of the recruitment in the organizations as well. We found statistically significant difference in item 6. It means that people with various education percept specific procedures for supporting of talented workers in different way. We consider that management of the company is more focused on employees with university education level and support them more than others. We recommend to the management of this company to change this situation and spread this focus also to other employees, because talented individuals should be hidden also in other categories of employees who have lower education level.

Table 8: Verification of the differences – worked years

Item	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
P value	0.277	0.751	0.022	0.243	0.780	0.003	0.593	0.887	0.507	0.396

Source: own processing

Last searched factor was the experience of employees measured by worked years for the company. It seems to be the most important factor in the process of identifying and recruiting talents. We found 2 statistically significant differences according to this determinant. It is again in item 6, and also in item 3. We assumed that more experienced people feel bigger support and think that there are lot of specific activities focused on talent recruitment.

4. Conclusion

Paper was focused on examination relationships among various factors (gender, age, work position, education level, and worked years) and process of talent identification and recruitment represented by some special activities (10 items) to recruit right people to right positions. This research contains results of the survey on the 432 respondents – employees in the company focused on information and communication technologies. We can conclude that worked years

is the most important factor of the perception in the process of talent identification and recruitment followed by age, and education level (table 9).

Table 9: Number of statistically significant differences according to selected factors

	gender	age	work position	education level	worked years
number of statistically significant differences	0	1	0	1	2

Source: own processing

From our results, we can conclude some following findings about talent identification and recruitment. Many times management thinks that only young, well educated, and experienced employees are talents for the company. Searched company should continue with adequate activities to support talented individuals. On the other side there is still a lot to improve. Managers should seek talents also in other categories of workers, not only in high educated employees. Talent should be sought in every person and try to find talents among all the workers employed in the company. Adequate work environment and conditions for talent improvement with proper motivation system created on objective criteria should be important factors to hire talented individuals from outside.

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“Person First” Language: The Language used to Address Individuals with Disabilities

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Abstract

The objective of research article is to spread awareness about “people first” or “person first” language and to educate those unfamiliar with this language that describes the phenomenon of disability and address individuals with various disabilities. There is a debate regarding the terminology to address world’s largest minority, for example “disabled people” (identity-first language) or “people with disabilities” (person- first language).

To achieve this objective, a wide range of literature from different information sources, for example, books, magazines, journals, online blogs, brochures and websites were analyzed. There has been increase in disability literature in last few years but authors faced dearth of quality publications in context to “person first” language.

After an in-depth review, authors present results into two categories, (a) examples of “what to say and not to” while referring individuals with disabilities, and (b) a review on the terminology adopted by various authors in their research to address them.

Furthermore, this study highlights the need for future research in educational and professional institutions to assess the knowledge of people with no disabilities in regards to “people-first” language. To summarize, we authors recommend, rather request all the researchers, international bodies and governmental institutions to use “person-first” language (e.g., people with disabilities) in daily discourse and to bring transparency in such linguistic movement worldwide.

Keywords: *Discrimination, handicapped, labeling, people with disabilities, people-first language.*

JEL Classification: *J14, J70, M54*

*Words can reflect as well as influence the way people think.
ODI (Office of Disability Issues, UK)*

1. Introduction

Language is a social instrument which helps people to perceive, express their thoughts and acknowledge things around them and there had been many instances in the past where people with disabilities been described by terms and language which nurtured societal prejudices, biased stereotypes and negative attitude towards them (Blaska, 1993). In recent decades there had been a movement initiated by people with disabilities claiming their rights as an individual and group, especially the terminology used to describe them. There have been many developments in this context but still debate is going on the language to be adopted worldwide to address people with medical conditions. Not everyone can be convinced on every “term” or “expression” as the concept of disability is multi dimensional but there has been consensus on certain language guidelines (ODI, n. d.).

Person-first language emphasizes on the indentifying someone first as a person and second, by descriptive word (St. Louis, 1999). The main notion behind this revolutionary ideology is to bring transparency while addressing or labeling people with disabilities, primarily as a “person”

and secondarily as member of some minority group. Selection of word or expression such as “the handicapped” educes pessimistic thoughts and creates an impression that all people with disabilities are alike (Snow, 1998).

Some words or phrases carry unpremeditated dissenting meaning beyond the original context, for example “idiot”, “moron” or “mental impairment” (St. Louis, 1999). Furthermore, people should be respectful and cautious in describing people with disabilities otherwise it leads to negative stereotypes, for example using words such as “handicapped” which originated from a begging term meaning “cap-in-hand” or the word “cripple” which is derived from the term “creep” (Blaska, 1993, p. 26). Ben-Moshe (2005) in his study share his perspective on use of terms and how it perpetuates social stigma attached to disability:

When we use terms like “retarded”, “lame”, or “blind” – even if we are referring to acts or ideas and not to people at all – we perpetuate the stigma associated with disability. By using a label, which is commonly associated with disabled people to denote deficiency, a lack, or an ill-conceived notion, we reproduce the oppression of people with disabilities (Haller, Dorries and Rahn, 2006, p. 65).

Many international organizations, and publishers have suggested authors and policy makers adopt person-first language and recommended to use words such as “disability” or “disorder” instead of terms “impairments” or “handicap” (St. Louis, 1999). ASHA (n. d.), the American Speech-Language Hearing Association, also advocates the use of person first language:

Disabilities are not persons and they do not define persons, so do not replace person-nouns with disability nouns”, such as “the aphasic”, “stutterers”, “the hearing impaired” and “depressed patients”. Instead, such guidelines recommend the use of terms of reference that emphasize the person rather than the disability, such as “people with aphasia”, “people who stutter”, “people with hearing impairment” and “people with depression (Barnish, 2014, p. 506).

The usage of person first language is not restricted to people with disabilities only but the examples can be cited in context to people from different walks of life, for example addressing a woman who is a doctor as “female doctor”(Lipscomb, 2009). Such remarks not only distracts the focus from her capabilities and achievements as a doctor but implies on her being a woman (Lipscomb, 2009).

Therefore, fundamental questions (rather objectives) of this paper are:

- How the different segments of disability can be addressed in a objective manner (non-derogatory, non-hurtful but respectful)?
- People first language has led to greater understanding of phenomenon of disability and been accepted by the organizations, institutions and industries to describe people with disabilities?

The another purpose of person first language is to spread awareness about the language which encourages positive meaning (discourages usage of words with unintended negative meanings) and show as much as sensitivity towards people with disabilities while addressing them.

2. Methodology

This research solely relied on data retrieved from electronic database i.e. Google Scholar, private and public websites, blogs, online magazines, etc. The following terms, “people first language”, “person first language”, “disabled people” and “people with disabilities” were used to abstract journals. Governmental and non-governmental websites were randomly browsed and taken as an indicator of the language used by policy makers, medical and non medical

health care professionals, authors and editors. There are more than thousands publications on disability and we cannot provide a comprehensive review of the vast literature review, therefore, important and useful publications was searched in order to provide new up to date and complete findings from our analysis in context to language used to address people with disabilities. For the current study, data search included articles and other related material from a wide range of sources across medical and non medical domains. In context to second objective, a different approach maintained to have an understanding about the usage of terminology used by researchers, government officials and other related segments of the industry over ten years to describe people with disabilities and the changing pattern of use over time. In this perspective, to maintain simplicity and since there is diversity in disability terminology (as discussed in Table 1), authors compares and contrasts the two terms i.e. “people with disabilities” and “disabled people”. Both terms have received wide spread circulation and use within the research and non research scenarios.

Authors have focused on data which is published or circulated in English language only (see also Sharma and Dunay, 2016). The reason behind to focus on the data in English language is to maintain the validity aspects in the research. To provide more insights, some words in one language when translated in other, lose it original content value. Thus, “Words which exist in one language but not in another, concepts which are not equivalent in different cultures, idiomatic expressions and/or differences among languages in grammatical and syntactical structures are issues which call for very specific decisions. These decisions along with factors such as, for example, who the researcher or her translators are and what they ‘know’ have a direct impact on the quality of the findings of the research and the resulting reports” (Birbili, 2000). Having said that, it can be observed that sometimes there are words with different interpretations regardless of language. Brown in her blog also conveys the same message, “Changing a phrase, even if it holds the same literal meaning, alters the subtle connotations and nuances of the speech, and communicates a different meaning and context than the original phrasing” (Brown, 2011).

3. Result and Discussion

The Disability Right Movement has managed to bring some noticeable changes in context to the attitudes of the people and language used to describe people with disabilities (Snow, 2007). Since disability has many segments, Table 1, showcases the words, expressions and terms used to address people with disabilities, covering both dimensions, i.e. “identity first” and “people first” language.

Table 1: Comparative analysis between “identity first language” and “people first” language

Nº	“Identity first language or direct labels”	“People first” language
1	The Handicapped or disabled people	People with disabilities (Blaska, 1993, Snow, 1998)
2	Blind person	Person who is blind; people with visual impairment (ODI, n. d.)
3	Bound to a wheelchair, confined to a wheelchair, crippled, handicapped, lame, uses crutches	Person who uses a wheelchair (ODI, n. d.); Wheel chair user (Lipscomb, 2009)
4	Mentally retarded persons or the mentally retarded	Person with intellectual disability (ASHA, n. d)
5	The Blind	Person who is blind, Person who is visually impaired, person with low vision (Lipscomb, 2009).

6	Deaf mute; deaf and dumb person	a) Person who is deaf: person who is deaf and cannot speak (ODI, n. d.; Lipscomb, 2009); user of British sign language (ODI, n. d.) b) Person with speech disabilities: Person with speech impediment; person with a speech disability (Lipscomb, 2009)
7	Midget/dwarf	Person of short stature (ODI, n. d.)
8	Autistic person	Person with Autism (Blaska, 1993)
9	Mongolism	Person with Down's Syndrome (Titchkosky, 2001; Blaska, 1993)
10	Epileptic	Person with Epilepsy (Titchkosky, 2001; Blaska, 1993)
11	Spastic	Person has spastic muscles (Blaska, 1993).
12	Birth defect	Person with congenital disability (Snow, 1998)
13	Normal person	Person without disabilities (Snow, 1998).
14	Stutterer	Person who stutters (St. Louis, 1999)
15	Stammerer	Person who stammers (St. Louis, 1999)
16	Fits and Spells	Seizures (ODI, n. d.)
17	Disabled child	Child with a disability (Blaska, 1993)

Source: Authors own interpretation

There are also some exceptions; there are some people or group of people who prefer to be identified by their bodily conditions. For example, in few cases, people who are deaf and people with autism prefer the terms “deaf person” and “autistic person” respectively (Lipscomb, 2009). In such cases it is better to confirm with them which terminology he or she prefers or how they can be addressed when approached.

In contrast to initial findings, authors tried to find out the journals, pamphlets, charts, websites, blogs and policy statements published or circulated in last 10 years at various levels of organizations, industries and institutions, where the concept of person first language has not been adopted yet. The stress is given the usage of English terms and expressions in the specified material. Despite advocating people first language as an instrument to eradicate societal prejudice and negative stereotypes, there are some random examples of terms and expressions which are still being used with respect to disability, as showcased in Table 2.

Table 2: Information on the sources which still practice Identity first Language

Nº	Termed used, expression or labeled as	Information Source	Remarks (Citation and title of an article or web link)
1	Disabled people	Government website (UK)	ODI, n. d.; Inclusive communication: language
2	Disabled persons	Government of India. Ministry of Statistics and Program Implementation.	SSD, 2017; Disabled Persons in India: A Statistical Profile 2016
3	Disabled population	Ministry of Home Affairs, Office of the Registrar General & Census Commissioner, India	ORGCC, n. d.; Disabled population
4	The handicapped persons	Ministry of Social Justice and Empowerment, Government of India. National Handicapped Finance and Development Corporation (NHFDC)	NHFDC, n. d.; NHFDC
5	Disabled workers/ individuals	Journal of Applied Research in Intellectual Disabilities, 2014	Nota et al, 2014; Employer Attitudes Towards the Work Inclusion of People With Disability

6	Physically and/or mentally disabled adults and children	Department of Health, Western Cape Government. Government of South Africa.	WCG, n. d.; Rehabilitation Services.
7	Non-disabled men and women.	Journal of Occupational Rehabilitation, 2013	Vornholt, Uitdewilligen and Nijhuis, 2013; Factors Affecting the Acceptance of People with Disabilities at Work: A Literature Review.
8	Economics of the Handicapped	American Economic Association. JEL Classification System / EconLit Subject Descriptors	AEA, n. d.; J1 (demographic economics; J14 Economics of the elderly, economics of the handicapped, non labour market discrimination).
9	Disabled and non-disabled children	International Journal of Inclusive Education, 2012	Khochen and Radford, 2012; Attitudes of teachers and head teachers towards inclusion in Lebanon.

Source: Authors own interpretation.

Many international journals (such as American Psychological Association) and publication houses have included people first language in their procedural framework (Olkin, 2002). Even United Nations important subsidiary, i.e. The UN Convention on the Rights of Persons with Disabilities (UNCRPD) also uses people first language in their policies, reports and notices (Schur, Kruse and Blanck, 2013). Many countries are also switching to this continuum approach such as the case of India can be discussed here. For example, the name of Pandit Deendayal Upadhyaya Institute for the Physically Handicapped (P.D.U.I.P.H.) was renamed in 2002 as Pt. Deendayal Upadhyaya National Institute for Persons with Physical Disabilities (PDUNIPPD, 2017) and the National Institute for the Mentally Handicapped was renamed as the National Institute for the Empowerment of Persons with Intellectual Disabilities. (NIEPID, 2017).

As they say every coin has two sides and same is true for this approach, there are some opposing views as well. The British rights movement has rejected the term person with disabilities, as it implies the disabling effect rests within the individual rather than from society (Clark and Marsh, 2002 cited in Schur, Kruse and Blanck, 2013, p. 7). There are some communities in USA such as American Deaf community does not prefer to use people first language as “they consider their disabilities to be inseparable parts of who they are” (Umstead, 2012).

4. Conclusion

The findings shows that people first language has gained momentum in research field but there many researchers or organisations who are not still aware of the importance of this language and moral implications attached to it. This could be for two reasons, firstly may be many journals lagging behind in adopting people first language in their editorial policies, and secondly government also not proactively investigating the extent of benefits associated with adoption people first language into their legislation.

One of the objectives of this article to showcase the labels being used to address people with disabilities. The objective of any language should to spread positive messages and to dismay the use of terms which encourage belittling, unfavourable, derogatory, or even stigmatizing attitudes and behaviour towards people with disabilities (St. Louis, 1999). Despite the increase in the use of people first language in research articles, governmental legislations and healthcare care documentation, there is still lot of unawareness of this language. There has been increase

in disability literature in last few years but authors faced dearth of quality publications in context to person first language.

The next step for authors would be to develop an instrument to conduct a quantitative study to evaluate the familiarity of people with no disabilities in context to people first language. This task would be segregated into two parts: research at university (academic) level and at organizational (professional) level. The results can provide valuable insight into the language used by people to refer to people with medical conditions and could provide further scope of research in quantitative and qualitative research in understanding the explicit and implicit attitudes of people towards people with disabilities.

Furthermore, the important thing we have to always remember while describing or dealing with people with disabilities is that they are people “first” and deserve to be treated with the same courtesy and respect like all other people (Lipscomb, 2009). The important thing and practically more difficult for people with no disabilities to acknowledge and address community in this context in a respectful manner and by avoiding inaccurate, out dated and less offensive language (Lipscomb, 2009). Therefore, authors hope this article will serve as a basic reference material for academicians and employers worldwide.

To summarise, people with disabilities have been a victim of generalisation and social prejudice which led to many myths about their capabilities and sometimes such myths takeovers the actual truth (Snow, 1998). Therefore, our society must regard people with disabilities as individuals with unlimited potential like other people and the use of first person language, as a promoter of dignity and respect, can influence individuals perception and behaviour towards people with disabilities.

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The Flow of Common Goods in the Rural Communities in the Perspective of Evolutionary Psychology

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Abstract

In the literature of evolutionary psychology, sociobiology, and the sub-disciplines of social sciences based on the concepts of evolutionary biology there are presented the results of research conducted among members of pre-agricultural primitive societies. Seeking cultural universals, fixed elements in patterns of behavior and ways of thinking, the conclusions of this type of research are used to explain the functioning of individuals and groups in contemporary modern society. Among others there are explained the issues of cooperation and sharing goods, in which key variables are: the degree of kinship, gender, frequency of interaction and neighborhood. There is a lack of texts that use the evolutionary paradigm to describe and explain social phenomena occurring in the communities, particularly with regard to rural communities.

In earlier publications, the authors attempted to build a model of the flow of goods in different types of social organizing, taking into account the concepts of sociological, economic and evolutionary psychology. In this paper the authors describe one of these forms - a rural community in the context of production and redistribution of wealth, using the achievements in the field of rural sociology and evolutionary psychology.

Keywords: *flow of common goods, sharing goods, cooperation, rural areas, rural community*

JEL Classification: *A13, O18, Z13*

1. Introduction

One of the more frequently discussed issues concerning the development of European Union states, both in scientific literature and in the media, is the issue of the underdevelopment of some of its areas. This applies particularly to those regions that are affected by the long-term syndrome. In solving the problems of different speed of social and economic development, both the support mechanisms and the reception of various types of supportive programs are considered. So there are the exogenous and endogenous factors that contribute to socio-economic development mentioned (Jenkins, 2000). In particular, this issue concerns rural areas. Mentality, established value systems and the practice of everyday life can have a different impact on the way new rules are adopted and thus cohesion in the changing societies is consolidated. It is therefore important to define precisely those conditions which, under the influence of external impacts, also change over time.

The authors attempt to define durable conditions regulating both the mechanisms of the flow of goods in rural communities and the mechanisms of cooperation that allows accumulation of different forms of capital (social, economic, cultural). Referring to the literature on psychological mechanisms shaped by biological evolution, cultural universals less subject to change may be identified. Cultural universals may affect the acceptance or rejection of social change and cultural innovation. This type of research has been conducted so far mainly among members of primitive societies and contemporary urban societies. Our purpose is therefore to define the applicability of evolutionary concepts based on evolutionary biology, such as

evolutionary psychology, in explaining the phenomena and processes characteristic for rural communities.

2. Methods

2.1 Methodological problems in research of rural territorial communities

2.1.1 Rural community as a collectivity type and rusticity as a conglomerate of features

Building typological models, often based on dichotomies, is significant for social sciences, although they try to emphasize the complexity of the examined aspects of reality. Such models are built on the basis of ideal types within the meaning defined by M. Weber. It is implicit in this approach that structures types are a necessary simplification, enabling analysis of phenomena. Natural sciences and engineering focus on the effects visible at higher levels of complexity rather than building models and finding phenomena that would suit them. New quality emerging at a higher level of organization is the result of processes at lower levels (Coveney & Highfield, 1995; Steward & Cohen, 1997). There is little work in social sciences that would also describe the complexity of the social world because of the lack of a theoretical framework and methodology that would allow exploration of complexity as an effect of lower-level aspects (Nowak, 2009, pp. 10-11). On the other hand, it is worth noticing that the problem of over-simplification is discussed in the humanities even in strands far from scientism, such as phenomenological sociology, which underlines the tendency of a man to typify or to build the image of the world based on generalizations and ideals (Zemło, 2003, pp. 153-158). This becomes particularly important when social, political or economic programs are undertaken on the basis of simplistic models. Not infrequently worked out typologies are treated as objective content of the social world, the artifacts created by scientists.

The problems of villages and rural areas in social sciences, and especially in sociology, were dealt with in two ways. At the beginning of the sociology development, the focus was mainly on the description of contemporary urban society, which was treated as an opposition to what is rural (Gorlach, 2004, pp. 17-27). While sociology described urban societies at that time, anthropology explored primitive societies and folk culture. Only at the end of the first half of the twentieth century an anthropological approach was applied to the description of urban societies. In the case of territorial communities research, it resulted in a transition from rigid dichotomy to the continuum concept (Redfield, 1941). This concept draws attention to the intensity of features, which, however, are arbitrarily defined as rural or urban – typical of territorial communities closer to large cities at one end of scale or small tribal villages on the other. This is a step towards a more accurate description of reality, in relation to the use of extremely simplified models. One can ask the question, to what extent the studied communities form the continuity of a given feature intensity, and to what extent one can talk about intervals on the considered scales. This is still a typological approach, however it makes it easier to break away from the dichotomy schema of city – village.

In the Redfield's concept presented decades before, there is clear impact of the theories of development based on Spencer's position in which development was identified with progress (Turner 2004, pp. 90-92) Types of territorial communities: tribal village, peasant village, town, city (Gorlach, 2004, p. 32) represent further stages of development. Although R. Redfield opposed the development on a continuum basis to the zero-one models, identifying further types of territorial communities as a result of the intensity of certain attributes could be explained by both linear and step change concepts. In terms of step change development, it was assumed that under the influence of sequence of events comes to revolution and social development goes to a "higher phase" (Sztompka, 2005, pp. 29-30). Often, in an evolutionary approach to social

science, we see a teleological explanation, and thus the identification of development with social progress. In biology, first and foremost, there is no assumption as to the direction of evolution, yet the matter under discussion is close to punctualism. Punctualism assumes that evolution is characterized by step change development, where certain species characteristics appear suddenly and are not the result of a continuous modification of a given trait (Dawkins, 2003, p. 137). The similarity is therefore that with the intensity of some variables new qualities develop (new characteristics), concerning not only biological but also social structures.

2.1.2 Primacy of qualitative research in rural sociology

The dichotomic conceptualization of the category of territorial communities was the result of failure of the social sciences in dealing with complexity problems. Similarly, focusing on the polar approach to social structure by concentrating on macrostructures on the one hand, and on microstructures on the other, did not allow describing important social processes. Few sociologists have attempted to explain the phenomena occurring at one level (macro or microstructure) by referring to the second level, however underlining the methodological difficulties in such explanation (Coleman, 1986, pp. 1320-1327). Nevertheless, it can be noted that in the sociology of the village intermediate level or in other words mesostructures are primarily examined. As in urban community research, the focus of research is on phenomena occurring on a local scale. The idea of locality is treated as a particular value strengthening the subjectivity of territorial communities (Bukraba-Rylska, 2013, pp. 52-60). On the one hand, it slows down the process of social atomization, on the other hand it is an opposition to globalization and the accompanying cultural homogenization.

In terms of methodology, sociology of the rural area, apart from research conducted in the United States, mainly uses qualitative methods, including primarily monographic methods, but also official and personal documents (Bukraba-Rylska, 2013, pp. 23-45), which does not allow to generalize the conclusions of the conducted research. These methods are too expensive and time-consuming for even one research, regardless of the descriptive qualities of research projects.

The issues outlined above make it difficult to implement newer research concepts accepted under the influence of increasingly tangible benefits from interdisciplinary research combining social and natural sciences. These benefits are noted, among others, by E. O. Wilson (1998), pointing out that the discrepancies between various disciplines of science in explaining phenomena are ostensible. Nevertheless, many of the results achieved by qualitative methods allow us to find "blank spaces" in the aspects of the examined reality that are not taken in more precise quantitative methods. The results of qualitative research may also provide arguments for solving the ostensible contradictions between the representatives of different theoretical orientations in social sciences.

2.2 Flows of goods and resource sharing in rural communities

2.2.1 Conceptualization of the flow of goods model in rural territorial communities

In the previous publications we attempted to construct a flow of goods model in various forms of social organization (Kukowska & Skolik, 2016). On the basis of socio-economic literature, we assumed that goods are treated differently, depending on the form of social organization:

1. In collectivities of the community type, to which traditional villages belong, there are strong bonds between individuals and their autonomy is small, which may facilitate the treatment of resources as common pool resources. The goods of this type is poorly divisible, but it is difficult to exclude members of the community from their consumption.

2. In collectivities strongly dependent on the rules of the market game, which include the farmer's village, there are relatively strong links between members of the community, but their autonomy is large, which may favor the treatment of resources as a private property. These kinds of things are poorly divisible, but the exclusion from their consumption is relatively easy.
3. In collectivities highly dependent on the rules imposed by hierarchical institutions (secondary purpose groups), which includes a suburban village, there are weak bonds between members of the community and the autonomy of individuals is high, which may favor treating resources as club goods. These types of goods are easily divisible, but access to their consumption is limited.
4. In collectivities which functioning depends on the social capital network (Murdoch, 2000) which include a tourist village, the links between members of the community are relatively weak, but their autonomy is not large, which may favor the treatment of resources as public goods. The goods of this type are both easy to divide and it is difficult to exclude third parties from their consumption.

Table 1: Typology of rural communities in relation to types of goods and forms of social organization

				PERSONAL BONDS	
				WEAK	STRONG
				Goods divisibility	
				Large (symbolic goods)	Poor (material goods)
INDIVIDUAL'S AUTONOMY	STRONG	Exclusion from consumption of goods	Easy	SUBURBIAN VILLAGE	FARMING VILLAGE
				Club goods	Private goods
	WEAK		Difficult	Hierarchy	Market
				TOURISTIC VILLAGE	TRADITIONAL VILLAGE
				Public goods	Common pool goods
				Network	Community

Source: Own study

In modern world we can see that globalization and the development of mass media resulted not only in the creation of the new consumer society and consumer culture (Karczewska & Bsoul-Kopowska, 2016) but also in the creation of the network society. This issue is important to the socio-economic condition of the rural areas.

2.2.2 The flow of goods as sharing of resources in an evolutionary perspective

Considering the influence of natural sciences on social sciences, including sociology, biology, especially evolutionary biology, cannot be omitted. Although one of the first postulated interdisciplinary fields from the border of both areas of science was supposed to be sociobiology, it seems that a greater impact of evolutionary biology on psychology is visible. In the past twenty years, such sub-disciplines as evolutionary psychology, memetics and the entire neuroscience area have been developed to explain the functioning of the human brain and the evolution of adaptive psychological mechanisms.

One of the problems raised by E. Wilson was to explain altruistic behavior among related and unrelated individuals in the case of the study of social animals. These issues are still vital in biological sciences, where evolutionary theory is confirmed by research on the genetic level,

for example inclusive fitness is explained as the realization of "the interest of genes" (Dawkins, 1996, pp. 102-130). Models elaborated by biologists are developed in the game theory, which is applicable in economics and cybernetics. It is also used in many other disciplines that study adaptation to the environment (Skolik & Robak, 2016). From the social point of view, particularly interesting issues are those explaining the cultural conditioning of altruistic behaviors, among others: supporting biological adaptation by socially-created content of culture – building systems of norms and values, rituals related to human sexuality and its position in society, taboos, and many more. Examples of studies confirming the support of the biological adjustment by the culture were provided by E. O. Wilson (1998).

The results of research conducted both among members of modern societies and the population creating still existing "primitive" tribal communities allow to capture cultural universals. They are fixed features, independent of the culture in which they occur, that is, those that are explained as a result of biological fitness. Such universal features are, among others: the prevalence of the family (Szlendak, 2010, p. 95), strong coalitions created by men (Buss, 2003, p. 102) or fraud detection mechanisms (Osiński, 2013, pp. 65-72). One can notice that these studies are mainly conducted in "modern societies" and among tribal communities – on two poles of the dichotomous scale of the urban / rural state (Kanazawa & Savage, 2009; Giskevicius & Kenrick, 2013). This does not mean that these studies are not carried out also among rural inhabitants, but rural areas in modern societies, especially western ones, are comparatively not so different from urban communities and are subject to the same cultural influences.

One can ask whether conclusions on the cultural universals observed on the ends of the scale: rural-urban can be applied to communities that are closer to the middle of the scale. To what extent can they relate to rural communities in advanced agricultural societies? In rural communities, for example, mobility was restricted and attachment to territory was more or less reflected in culture, both in the folk and in the court one. On the other hand, with development, culture is less and less dependent on biological determinants, and its artifacts are subject to specific, autonomous evolution, among others, thanks to new means and techniques of information transmission (Blackmore 2002, pp. 65-70).

From the point of view of biological evolution, sharing of goods is an altruistic behavior, which raises the chances of survival of the individual and the transfer of genes to successive generations. For this reason, it is most biologically advantageous to share goods between relatives. Due to the evolution of mechanisms inducing people to behave altruistically within the species (as they did for other species), simultaneously egoistic behaviors evolved, using the tendencies of other people to altruism. As the population grew, the human brain evolved in a direction of memory development that allowed to gather data about past experiences with each individual within a group. Brain biology has not changed in a few thousand years. Yet, the communities in which a man functioned grew larger. This resulted in the development of cultural rules (norms and values) that supported biologically-developed adaptive mechanisms. On the one hand, accepted values as cultural rules became valuable intangible assets, which began to be treated as public or club goods. On the other hand, the higher density of population led to the need to interact with non-related individuals, which increased the importance of abstract institutional rules in adapting individuals to the social environment. In traditional groups individuals are more difficult to cope with such abstract rules, which are initially incomprehensible to them, and without them the mechanisms of reasoning are not activated (Osiński, 2013, p. 70), which would allow these rules to be applied. With the increase of this type of rules we can expect the advantage of universalism over particularism in social attitudes, the greater importance of legal norms over moral and customary ones.

3. Discussion: Possibilities of applying evolutionary assumptions in explaining phenomena occurring in the rural areas

3.1. Family and neighborhood relationships in a rural community from the perspective of evolutionary psychology

One of the cultural universals that has been described in studies of human behavior is a clearer tendency for men to build coalitions. It is emphasized here that male coalitions are impermanent alliances, which in consequence leads to a permanent redevelopment of the network of social relations. Male individuals form bigger relationships, but they have weaker ties (Argyle, 2002, p.26, Kukowska, 2016, pp. 172-173). The durability of the alliance depends mainly on the profitability of individuals participating in this and not another coalition. The literature on sociology of the village raises the question of the breakdown of social ties in neighborhood relations as an important social problem (Turowski, 1995, pp. 178-179). In this respect, the sustainability of relationships is considered as a characteristic for rural communities, contrasting them with urban territorial communities. Strong social ties were formed due to family reliance on the community. Increasing autonomy through greater dependence on institutions of general society, on the market and on the new professional structure has, however, undermined those ties (Bukraba-Rylska, 2013, pp. 454-460). As a result, social capital of a community has become weaker, and individuals can spend less resources on controlling the behavior of others. Because at the same time it allowed to interact with non-community entities, there number of variants for the coalition was growing. It is worth noticing that according to the assumptions of evolutionary psychology it was still the domain of male individuals. In the absence of behavior control, the result was a greater tolerance for more frequently emerging cultural innovations and the progressive convergence of rural culture to urban culture.

It is assumed that greater openness to cultural influences fosters the change of the family model, which is an important element of the social structure of the village community. The traditional village is described as "federation of families" (Bukraba-Rylska, 2013, p. 141). Taking into account the psycho-evolution assumptions, an interesting research theme would be, among others, an issue of change in parental investments. In the traditional villages, children were treated as "small adults" as the help in running a household. Investments in children were mainly related to their economic functions, and less important was the creation of strong emotional bonds (Bukraba-Rylska, 2013, pp. 154-155). Clearly there was altruism in the situation of "being in the hole" (helping people in a poor financial situation), where investment in offspring was an economic safeguard for aging parents. On the other hand, with the cultural changes and the separation of households of children and parents, altruistic behavior typical of the "surplus" situation becomes more noticeable, in which parents constantly invest in children despite the better economic situation of the younger generation. From an evolutionary perspective altruism in the regressive situation is triggered in the event of a threat, i.e. an economic one. The increase in quality of life may be accompanied by an increase in altruistic behaviors typical of the surplus situation, corresponding to increasing the chances for the group (Poleszczuk, 2004, pp.126-130).

Investments in offspring are more pronounced in the case of female lines due to the uncertainty of paternity. As a result, women are more likely to form strong bonds between relatives (Szlendak, 2010, pp. 58-68). On the other hand they migrate from rural to urban areas more often than men, which can be justified by better prospects for parental investment. Observed phenomenon is over-representation of productive men in rural areas (Główny Urząd Statystyczny, 2011). It can be assumed that the adjustment effect from the point of view of the

entire social structure of the village is the resemblance of a village to the structures typical of urban communities.

Cultural influences on the rural community also resulted in changes in neighborhood relations. In the nineteenth-century Poland typical for the village was the incorporation of unrelated close neighbors of high social standing into the family structure (Bukraba-Rylska, 2013, pp. 142-143). It can be assumed that this was a manifestation of feminine strategies aimed at building relationships that ensure economic security for themselves and their offspring, and male strategies for building coalitions to increase their social status. From a psycho-evolutionary point of view, the high social status of a man provides greater reproductive opportunities, as confirmed by the fact that marriages were arranged because of that status.

The personality traits such as conformity and empathy have significant meaning for building social relationships. Empathy is treated as feature of an open community, which is enforced by the anonymity in the city space. This openness is due to the need to interact with the inhabitants of the heterogeneous community. Conformity characterises members of rural communities (Krzysztofek & Szczepański, 2002). Both empathy and conformism foster imitation, which in turn strengthens affiliative attitudes towards the followers (Kulesza, 2016, pp. 59-66), and thus contributes to the creation of social bonds. While it is not possible to question the issue of enforcing openness by urban communities (although there is also the phenomenon of gettoisation in urban spaces), both conformism and empathy can be regarded as relative traits. Conformity is more strongly expressed towards relatives, which is translated at the level of biology and culture. Likewise, one could explain the phenomenon of empathy, of which level rises when the subject of empathy has certain common features with the individual. This issue becomes important in the case of social capital research in rural communities that builds it on the basis of relationships with occasional users of rural areas such as tourists.

3.2 Tourism in rural areas as a particular problem of solving dilemmas of sharing goods

The problem of building social capital in rural communities from the perspective of sharing goods could be explained in the context of the "strangers" emerging in rural areas. Particular case is the tourists, and the institutionalization of agritourism is a visible influence of urban culture on rural areas, which in the economic perspective must adopt a more open attitude. The stranger thus becomes "the countryman" and activates the mechanisms typical of traditional village incorporation into ecological space of the community, which until recently was treated as an extended family. Thus, the tourist is included in the community, just like before the family included high-status neighbors. It can be assumed that a projection of one's own idea about affiliation needs of tourist occurs here. As a visitor to the household, he occupies a special ecological position in its space. F. Znaniecki has already paid attention to such special positioning, creating his own concept of human ecology (1938). Taking into account previous comments, it can be assumed that the projection of the traveler's needs of affiliation is an attitude which is opposed to the empathic perception of his needs. Mechanisms that previously led to building coalitions between unrelated individuals are being limited here. The manifestation of empathy is the perception of the need for a private space by a tourist during his/her leisure. Thus the space occupied by him/her becomes a private good. Previously hosted guests occupied space, which was treated as a common good.

In the relations with tourists as strangers the economisation of social relations is visible. A tourist is an individual that brings income to the villagers. At the same time, he/she participates in the consumption of local common goods, especially intangible goods, such as the landscape, the architecture, places of active recreation. From the point of view of evolutionary psychology, landscapes resembling the areas inhabited by primitive *Homo sapiens* are particularly attractive.

In the "savanna hypothesis" it is assumed that they are rich in vegetation cover and flowing water (Buss, 2002, pp. 108-110). Rural areas gain additional attractiveness when they are intensely visited. The unknown space transforms into a familiar place (Yi-Fu Tuan, 1977, p. 54). Cultural capital is thus created. Returning of tourists to the same place facilitates building ties with the villagers, and thus social capital. Cultural capital and social capital are then transformed into economic capital.

With the acquisition of economic value, rural space previously treated as a common good may be subject to far-reaching privatization. An example is the access to attractive places such as lakes, forests, nature and architecture. However, in this way the divided space loses its attractiveness. There is a process of weakening the cultural, social and, consequently, economic capital.

4. Conclusions

Acceptance of openness and thereby sharing a part of goods with the members outside the community is a requirement for functioning in modern society. The urban environment in this adaptive aspect condemn the behavior connected with closure. On the other hand, opening to a nation, an ethnic group can lead to the closure to the large social structures. Underlining the foreignness of other societies, nations, ethnic groups is a mechanism for strengthening intra-group cohesion (Merton, 2002, p. 365). It is therefore possible to ask whether domestic tourism is a factor that increases or decreases tolerance towards the "strangers", representatives of foreign cultures. This problem can be compared to acceptance or not acceptance of immigrants in UE states (Skiba 2016).

Cultural innovations accepted in rural communities can be considered in the context of enhancing the adaptive effects by these innovations. This adaptation in turn can be described : 1) by referring exclusively to socio-cultural variables; or 2) by referring to explanations using the concepts of evolutionary psychology and other disciplines based on evolutionary biology. Adaptation to new cultural conditions in small extent reduce the impact of biological conditions. But it starts the process of institutionalization, which transforms the whole rules of functioning of rural communities.

The transformation of the socio-occupational structure of rural areas, in particular the progressive domination of non-agricultural professions results in the revaluation of goods related to rural areas. While the dominant role before played the material assets of agricultural production, nowadays, intangible assets begin to dominate. There is a positive feedback here: in the countryside the occupations in the service sector are exercised, which domain is the operation of intangible goods. The more profitable the work in the service sector is, the more attractive those goods become.

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The impact of minimum wage on senior age category employment in Visegrad countries

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Abstract

In connection with the current trend of European population aging and the necessity for Human resources managers to adapt and manage the situation within the enterprises, the aim of papers was to identify how the minimum wage affects age category 50+ employment in the Visegrad countries. On the basis of secondary data gained from statistical portals were assessed impact of minimum wage on the current employment situation of workforce category 50+ and compare situation in the Czech Republic, Hungary, Poland and the Slovak Republic. The obtained data were organized and processed into graphic form. To determine differences and dependent variables of interest were used two-dimensional contingency tables. For the analysis of contingency tables were used chi-square test, and the actual and expected values were compared. Results of testing and validation of hypotheses were discussed and processed into conclusion.

Keywords: Human resources, age category, minimum wage

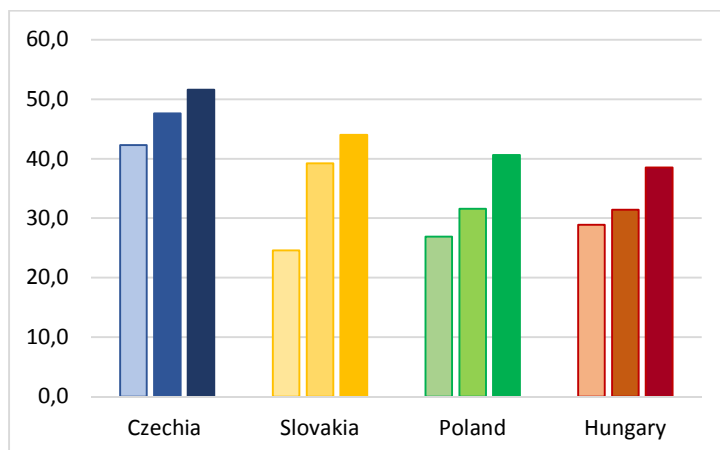
JEL Classification: M54, O15, M12

1. Demographic aging and economic growth

Countries of Visegrad agreement (hereinafter V4), but also other countries in Europe, currently extending the age of retirement. The age of retirement is increasing mainly due to the demographic changes and increasing life expectancy (Boldrin, Montes, 2005). Thanks to these demographic changes also increases the proportion of people who have valuable experience, specialized professional knowledge, greater responsibility, reliability, maturity. (Cervellati, Sunde, 2005). If the Czech Republic wants to achieve economic growth and stabilize its pension system will have to take into account the potential of older workers (Dufek, Minařík, 2009, Blankenau, Simpson, Tomljanovich, 2007, Gonzales-Eiras, Niepelt, 2012, Boons, Montalvo, Quist, Wagner, 2013). It is argued repeatedly in the literature that there is several factors influencing the employment growth. A wide range of authors study the implications of demographic aging on economic growth (Börsch-Supan et al., 2007), the regional disparities (Ludwig, 2005), the influence of workers aging (Gonzalez-Eiras, Niepelt, 2008), Schimke 2014), the workforce age distribution (Lévesque and Minniti, 2005, Acemoglu, Johnson, 2007).

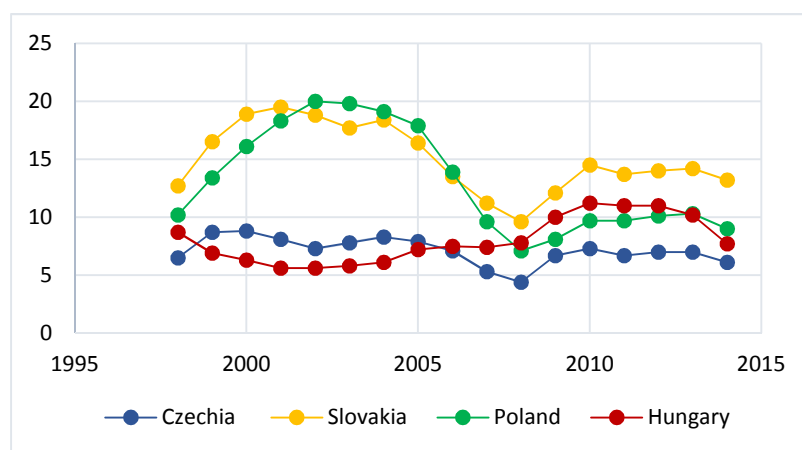
1.1 Labor market of V4 countries

The Czech Republic (hereinafter Czechia) has represented the V4 countries with the highest unemployment rate for the past decade (MPSV, 2015). Within that time employment rate hasn't dropped below 64%.

Figure 1: The employment rate for people 55 and older in the years 2003, 2008 and 2013

Source: Eurostat, 2015, the own processing

The most visible change was recognised in Slovak Republic, where the rate almost doubled within five years (from 24,6% in 2003 to 44% in 2008). Outcome of this change caused that Slovak Republic shifted from the last place to the one before Poland and Hungary (WBJ, 2014, Eurostat, 2015). The least significant growth was found in the Czech Republic, amounting to less than 10% in ten years due to high employment rate it had kept among people aged 55 and older. Based on data displayed in the figure 1 can be concluded that the Czech Republic had a lot older workforce than the rest of studied countries. In every V4 country can be observed a trend of increasing number of people aged 65 and older within the total population. In case of Slovak Republic and Poland numbers had been growing at a slow pace (2% per studied time period), while in the Czech Republic the number of people aged 65 and older increased from 13% to 18% among the overall population.

Figure 2: The unemployment rate of surveyed countries (in %)

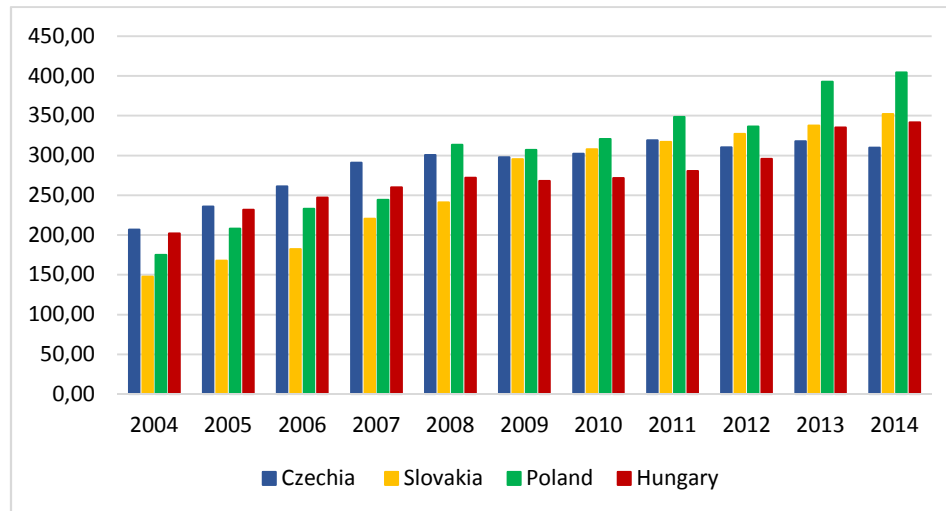
Source: Eurostat, 2015b, own processing

The unemployment rate, displaying into the figure no. 2, within the studied countries can be divided to two time periods. Before 2008 there had been two pairs of countries with similar data: Czechia + Hungary and Poland + Slovak Republic. While data for Czechia and Hungary remained rather stable and below 10%, the latter amounted to approximately 20%. Second time period would be the post 2008, when unemployment rate of these four countries equalized. Average unemployment rate amounted to 7% in Czechia, approximately 10% in Hungary and Poland, and 15% in post-crisis Slovak Republic.

1.2 Minimum wage of V4 countries

Unemployment rate was highly influenced by minimum wage, which is displayed in the following figure.

Figure 3: Comparison of the minimum wage for all countries (EUR/month)



Source: Eurostat, 2015b, own processing

Czechia and Hungary have experienced the slowest increase in the minimum wage, which could be the reason why unemployment rate was lower than in Slovak Republic. Poland was, however, a bit specific. With a minimum wage that more than doubled from 170 to 400 EUR per month, it kept the unemployment rate at approximately 10%. One of the reasons for increase in unemployment rate along with higher minimum wage was that companies with growing minimum wage were not willing to employ the same number of employees as in the past, when the minimum wage had been lower.

2. Data and Methods

Testing of hypotheses included two hypotheses, the null hypothesis (H_0) and alternative hypothesis (H_1). The null hypothesis considered independence of variables and the alternative hypothesis falsified the null hypothesis. For the verification process level of significance of chi-square was set to 5% ($\alpha = 0,05$). Two pivot tables were used to identify the difference and dependence of observed variables, while dependency between variables was derived from their values. In order to analyse the pivot tables the chi-square test χ^2 about independence was used, which further compared the real and expected values. Formulas for testing criteria were as following:

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^s \frac{(n_{ij} - n'_{ij})^2}{n'_{ij}} \quad (1)$$

- n_{ij} theoretical/expected frequency,
- n'_{ij} calculated conditional frequency,
- i row number in the pivot table,
- j column number in the pivot table,
- r number of rows in the pivot table,
- s number of columns in the pivot table.

Pearson correlation coefficient was used for identifying levels of dependency between variables:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (2)$$

x independent variable,
 y dependent variable,
 \bar{x}, \bar{y} averages of individual variables,
 n frequency

According to the calculated values of testing criteria of the chi-square test it was possible to further decide verification or falsification of the null hypothesis. Level of dependency was identified based on the correlation coefficient. Program STATISTICA was used for calculations. Before data collection, were provided the following hypotheses.

2.1 Hypothesis Testing Results

First hypothesis

H_0 : Minimum wage is not influenced by the population aged 60 years or over.

H_1 : Minimum wage is influenced by the population aged 65 years or over.

Results of the first hypothesis were displayed in the following table.

Table 1: Results of the first hypothesis

	Czechia	Slovak Republic	Poland	Hungary	V4
p-value	0,000019	0,00006	0,000236	0,000004	0,021225
correlation coefficient R	0,7794	0,9202	0,8906	0,9568	0,3465
result	p < 0,05	p < 0,05	p < 0,05	p < 0,05	p < 0,05
rejection H_0	yes	yes	yes	yes	yes

Source: own processing

When the first hypothesis was tested for the **Czech Republic**, the p-value was calculated via Pearson's coefficient $p = 0,000019$. Results showed that the p-value was lower than the level of significance and the null hypothesis was therefore falsified. There could therefore be concluded, with 95% certainty, which population aged 65 or over influenced the minimum wage in Czechia. Size of the correlation coefficient, which equalled 77,94% for Czechia, showed a high level of dependency between variables.

In case of **Slovak Republic**, value of Pearson's coefficient was $p=0,00006$, which means that the p-value was lower than the level of significance and therefore the null hypothesis was falsified. There could therefore be concluded, with 95% certainty, that the minimum wage in Slovak Republic was influenced by the population aged 65 or over. Size of the correlation coefficient, which equalled 92,02%, proved a quite high level of dependency between variables.

P-value of Pearson's coefficient for the first hypothesis for **Poland** was $p=0,000236$. P-value was lower than the level of significance and the null hypothesis was therefore falsified. There could therefore be concluded, with 95% certainty, which population aged 65 or over influenced

the minimum wage in Poland. Size of the correlation coefficient, which equalled to 89,06% in case of Poland, showed very high level of dependency between variables.

When testing the first hypothesis for **Hungary**, p-value of the Pearson coefficient equalled to $p = 0,000004$. P-value was lower than the level of significance and the null hypothesis was therefore falsified. There could therefore be concluded, with 95% certainty, that the minimum wage in Hungary was influenced by the population aged 65 or over. Correlation coefficient, which was calculated to 95,68% for Hungary, proved a very high level of dependency between variables. For the **Visegrad four countries** altogether, p-value of the Pearson's coefficient equalled to $p = 0,021225$. P-value was lower than the level of significance and the null hypothesis was therefore falsified. Correlation coefficient amounted to 34,65 % and showed low level of dependency between variables.

Second hypothesis

H_0 : The unemployment rate is not influenced by minimum wage.

H_1 : The unemployment rate is influenced by minimum wage.

Table 2: Results of the second hypothesis

	Czechia	Slovak Republic	Poland	Hungary	V4
p-value	0,102674	0,310307	0,006627	0,11816	0,018338
correlation coefficient R	0,3572	0,3374	0,7601	0,4989	0,3542
result	$p > 0,05$	$p > 0,05$	$p < 0,05$	$p > 0,05$	$p < 0,05$
rejection H_0	no	No	yes	no	yes

Source: own processing

Testing of the second hypothesis for **Czechia, Slovak Republic and Hungary** resulted in p-value of the Pearson chi-square test higher than 5% level of significance. Null hypothesis was not falsified in case of these three countries, and there could be concluded that the unemployment rate was not influenced by minimum wage. **Poland** was an exception with p-value $p=0,006627$. P-value was lower than the level of significance and the null hypothesis was therefore falsified. Alternative hypothesis was chosen, and there could be concluded that the unemployment rate in Poland was influenced by minimum wage.

3. Results and Discussion

The results of the first hypothesis showed that minimum wage was influenced by the rate of population aged 65 or over. This dependency was calculated for each country individually as well as all countries as a whole. There was a direct positive dependency between these two variables. It means that minimum wage grew in relation with a growing number of people aged 65 or over. (The world of labour, 2013). The results of the second hypothesis showed two contradicting results. In three studied countries, Czechia, Slovak Republic and Hungary, the unemployment rate was not influenced by minimum wage. This fact contradicts the general idea that employers tend to employ fewer employees, when minimum wage increases, and it leads to increase in unemployment rate. However, results for Poland proved this assumption and there could be concluded that minimum wage was influenced by unemployment rate.

Table 3: Calculated values of hypotheses

Country	H1	H2
Czechia		
p-value	0,000019	0,102674
correlation coefficient R	0,7794	0,3572
Slovak Republic		
p-value	0,00006	0,310307
correlation coefficient R	0,9202	0,3374
Poland		
p-value	0,000236	0,006627
correlation coefficient R	0,8906	0,7601
Hungary		
p-value	0,000004	0,11816
correlation coefficient R	0,9568	0,4989
V4		
p-value	0,021225	0,018338
correlation coefficient R	0,3465	0,3542

Source: own processing

When comparing **the Visegrad countries**, the best results in relation to the employment rate were found in the Czech Republic. Overall employment rate did not go below 64% within the studied period, employment rate among people aged 55 or over in 2013 exceeded 50%. Overall average unemployment rate was 7%. Within the V4, Czechia had the worst results with regard to minimum wage. Although the V4 countries showed rather balanced results, research data identified some differences. Slovak Republic had the highest results with regard to the unemployment rates among primary education and lower secondary education, where it reached 40%. Within the V4 countries, Hungary was hit the most by the financial crisis in 2008 and hasn't caught up on its pre-crisis employment rate. Poland had the highest minimum wage.

In the hypotheses examined in this work, were made the result in the dependency of minimum wage on unemployment rate (Tanzi, Schuknecht, 2000, Schneider, Kallis, Martinez-Alier, 2010), The result was the opposite of the three countries, namely: according with increasing the minimum wage, the companies become reluctant to hire smaller number of employees and thus increasing unemployment in the country.

Workers seniors brings companies a clear vision, goals, experience and knowledge of the processes (Casey, Metcalfand, Lakey, 1993, Goudswaard, De Nanteuil, 2001, Ilmarinen, Tuomi, 2004). On the other hand, can be expected a certain trouble keeping pace with modern technology, constantly learning and proactive attitude and enthusiasm (Glomm, Ravikumar, 1992, Finnish Institute of Occupational Health, 2014). The solution can be assembling teams across age groups, the so-called diversity team in order to keep these workers in the labor market, share their experiences and bring benefits to all interested parties (Rašticová, 2013).

4. Conclusion

The aim of the paper was to determine whether the factor of minimal wage affects the employment of 50+ workforce segment in the labor market in the countries of the Visegrad agreement, comparing individual countries, examined their differences and similarities. In the hypotheses examined in this work, we have made the surprising result in the minimum wage, depending on the unemployment rate. The result was, however, reversed in three states: a rising minimum wage, companies are reluctant to hire fewer employees and thus increasing unemployment in the country.

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Career management

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Abstract

Concept of career is important not only from the individual's point of view but from the function of human resource management as well, which must concentrate on the fact that employees of the organization systematically prepare themselves for various working positions and in the meantime keep quality and reliable employees without interrupting a plan of succession and replacement. Nowadays in such turbulent environment, career management is closely connected to the concept of lifelong education. In the research realized in 39 companies of food industry in western region we found out that almost a half of the subjects does not pay systematic attention to career development of the managers and employees. The issues are resolved more or less spontaneously and lively and the attention is paid when it is impossible to postpone it. More favorable situation was found in medium size companies ranging, as for the number of employees, on higher level. Research of dependence of conditions for career development depending on the size of a company, reached profits and organizational legal form proved that none of the given factors has a significant influence on the career development management.

Key words: career, management, manager, employee, development

JEL classification: M12, L20, L66

1. Introduction

Career might be considered as a set of working experience of an individual throughout their life. Career has two aspects – objective and subjective. Objective aspect reflects actual, observable environment and activities, for example when an employee takes part at a training which might help him in the future. Subjective aspect reflects how an individual perceives his current situation. Within definition of the expression career it is important what personalities influence a human being, how he perceives them and explains them.

Concept of career as a graduation up the career ladder of the company is nowadays significantly limited. Traditionally perceived career represented a movement of an individual upwards in a company whereas on each new level the employee gained more power and control over resources, more responsibility and higher salary. Except for a movement upwards in an organization, career also meant increasing professionalism and qualification in the field which resulted in the fact that employees will dedicate themselves to the given field and will specialize in it. These forms of career will not diminish although due to changes in an external environment it is necessary to reconsider the concept of career and perceive it as a set of individual's experience.

It is possible to result in such ending only based on the fact that many companies become flatter after the process of restructuring, changes, mergers and acquisitions and become more oriented on team work, which decreases number of formal levels in an organization and the chance to be promoted in a classical sense of meaning. Career perception is influenced by the change in relationship between employees and organization as well – nowadays organization are no table

to guarantee long - term employment and working insurance which results in a change on both sides.

Imagination that organizations will offer working insurance and promotion upwards by the exchange for high quality performance is already relic. Except organizational changes, other factors influence the change in understanding career. Among others these are strengthening concept of life long education which supports employees in on-going career development and improvement by qualification development and therefore they are able to individually seek working opportunities on the labor market. People tend to cherish more the possibility to gain new experience. Increased mobility of work force and more opportunities negatively influence loyalty and occupying new positions influence career perception as well – relatively young people with less experience are offered a chance as well. For example, in the Eastern Europe on managerial positions, in comparison with the EU countries there are seven to eight years younger employees.¹³ This difference shows that specific positions will not be continuously released and in such case vertical career promotion will be slower.

2. Material and methods

The objective of the paper was the evaluation of possibilities of career development of managers and employees of selected group of food industry companies. The basic knowledge base were resources of domestic as well as foreign vocational and professional literature. Primary data were gained from a sample of 39 small and medium size companies of food industry in western region. Specifically they were 9 mills, 21 bakeries, 5 pasta producing companies and 4 confectionaries. From a territorial point of view the companies are situated in Nitra region and Trnava region, according to organizational and legal form they are 35 limited companies and 4 incorporated companies.

As for the methodology used within gaining primary data, we used a questionnaire and an interview. Within processing of information we used the methods of analysis, synthesis, deduction, comparison, followed by the method of correlation analysis.

3. Results and discussion

Nowadays career can be considered as a set of jobs, tasks and experience in various companies throughout life, which are a result of conscious and more or less systematic decisions of an individual. Career includes all the directions of individual's movement in a company and outside. Similarly formulated is the expression protean career¹⁴, representing career that often changes thanks to changes in interests, skills and priorities of employees as well as thanks to changes in work environment. Employees are more responsible for their career, they plan their career direction and select their trainings and development programs more proactively. Perception of protean career has an influence on the development of employees as well – the goal of such perceived career is psychological success which means that employees are proud at what they have accomplished in their life. Their success does not necessarily has to be connected with their work accomplishments but on their family or health as well. Psychological success of employees is more under control than traditionally perceived career in which success does not depend solely on the effort of employees but on the circumstances, like availability of vacant positions in organization or decision making of seniors, as well. Psychological success

¹³ Weidlich, R. (2011). Market Pressures for Tournament Type Organization in Emerging Central: Evidence. Implications and Sustainability. The International Conference on Global Business & Europe Economic Development. Bratislava. Vol II. ISBN 0-9660656-6-2. s. 16

¹⁴ Hall, D.T. (2006). Protean careers of the 21st century. Academy of Management Executive, Vol 11. s. 8-16

reflects internal understanding of the individual and is not dependent on formal recognition from the side of the company (higher salary, separated office and so on).

Within the organization an employee can move all the directions of the career. Mostly perceived change is a promotion that is a movement upwards. Promotion can be directly in functional line where the promotion alongside the managerial line is combined with promotion alongside the professional line. Promotion upwards can be connected with a transfer to another professional field. On one level employees develop by job rotation and short-term internships on different departments. Within career an employees can perform outside organization as well, on international post of foreign branch, on position at headquarters or they can shortly perform in any other organization. Movement downwards in an organization does not necessarily mean a kind of punishment for an employee. Often a professional is demoted to a lower level on a managerial position within dual career and cannot be promoted professionally without having managerial responsibilities.

New perception of career means that organization must enable employees to understand their interests, strong and weak points and based on this finding they can select appropriate form of personal development by form of work experience, personal contacts and relationships or formal training programs. Organizations must as well plan in advance monitoring of their abilities and talent of their employees and therefore strengthen and adjust their requests with the needs resulting from the strategic intention of an organization.

Career management

Career influences relationship between employees and organization and both sides of this relationship have their specific opinion about its conception. Career is created based on mutual interactions between organization and employee. On one side it is an image of individual's ambitions, on the other side it is not a reflection of the organization's needs. Therefore employees as well as employers, both are responsible for the career. These two perspectives of career are called career planning and career management.

Career planning is a process in which specific employees define and implement steps and approach thanks to which they reach their career goals.¹⁵ Within career planning employees must first select goals and clarify their own needs and values and priorities. They must as well pay attention to what possibilities of career there are in an organization and what requests are proposed on employees of specific position. Their intention should be presented to their senior to possibly harmonize in advance requests and ambitions of an employee with the imagination of the company about them. Therefore it is necessary to reflect information gained from the evaluation of work performance to various areas of human resource management one of which is career planning management.

Career management is a process thanks to which organization selects, evaluates and develops employees who can consequently create qualified talent potential for future needs of organization. From the employees' side it is inevitable for the career management (i. e. for the needs of organization) to provide exact information about their skills, work experience, interests as well as ambitions of their career. Otherwise, their personal ambition and imagination may not be compatible with the imagination of the organization. Career management looks for employees inside organization thanks to leaflets and notices (job posting) when the employees nominate themselves for vacant positions by recommendations from seniors and mentors thanks to inventories of skills. We use diagnostic educational centres for selection of best candidates,

¹⁵ Milkovich, G.T. & Boudreau, J.W. (2007). HUMAN resources management. Irwin. 360 p.

or data about previous performance of the employee, their experience and number of years in the organization.

Career management

Searching	Selection
<ul style="list-style-type: none"> – Leaflets, notices – Employees nominate themselves on vacant positions – Recommendations of seniors and mentors – Inventorial skills 	<ul style="list-style-type: none"> – Diagnostic education centres – Previous performance – Skills – Number of years in an organization

Source: own elaboration

Approach and functions of human resource management influence skills of employees by improving and development of human capital. Formal as well as informal education and development of management influence growth and development of all the employees¹⁶.

In case that an employee does not have an opportunity of promotion in a company in the field of their professional direction, they may have the following possibilities:¹⁷

- They satisfy with the given situation, their professional development stops, they stay on the given level of career. In case they realize their meaning for the organization, they do not tend to invoke the feeling of dissatisfaction,
- They change direction of their professional growth, creating so called double career promotion,
- They leave the organization and seek employment in other organization.

Career stages

Career stages are traditionally perceived in accordance with the real age of an employee – young person experiences stage of preparation, elder one is in the stage of development, at the age of 35 to 55 years they are at the top of their career, reaching so called career plateau and finally there is a stage of retreat. This approach is possible in a stable environment within people who do not like change.

In the present dynamic environment physical age of employees and length of their employment in an organization do not have to necessarily follow traditionally perceived stages of career. More modern approach says that career develops in cycles and each individual can pass through given stages more times within one career.

In the stage of preparation the individual tries to clarify own interests and evaluate their potential and forms skills via educational programs and, in the case of young people, they decrease their dependence from the family and school. The stage of preparation serves for trying more working roles by short – term work experience or practice. Decision making at this stage is influenced by education and previous experience. It is a period of a big change in personal, as well as in professional life. In an organization the employee must face transformation from the position of an outsider to the position of an insider and strengthening psychological contact. Process of change is easier if the organization presents work realistically.

In the stage when people select their future position, they have to realize what success means to them and what they imagine under the expression success. They should also take into

¹⁶ Bretz, r.d. & Judge, T.A. (2002). The relationship between person-organization fit and career success. Working paper, Cornell university center for Advanced Human Resource Studies, New York.

¹⁷ Rudy, J. & Luptáková, S. & Sulíková, R. & Vargic, B. (2011). Organizačné správanie. Bratislava: Faber. 238 s.

consideration their professional as well as personal goals and values. On the other hand, people usually realize what they want to be and what is attractive for them according to the experience. Therefore at the beginning of their career they hardly perceive their abilities, values and motivation and they often vote for their position because it might be fashionable or financially attractive.

When the employees select appropriate position in an organization, they begin to develop their general knowledge and skills by specific experience original in an organization or specific for the position.

Development is a period of orientation and it is connected with a formal process of socializing in an organization. A man tries to find their position (at post, work, organization) in an organization after their acceptance. Actually, it is a process of assimilation in new environment. The employees try to learn what they are expected to do, how to behave in new environment. It is also a period of career development, a part of working life when most people try to achieve the best results possible, they seek responsibility and power, they are interested in promotion upwards in an organization. People try to implement in the organization, search for the way to achieve it, solve problems how to handle work and career and how to harmonize career of both partners. Double career marriages are marriages where both partners work and have demanding posts at work. In Slovak Republic it is common that both partners work and are able to handle family affairs. In case of the situation when both partners with high efforts build their career, arguments in personal life may emerge. Partners must be able to bare success at work of the other one, or agree on who starts to build career sooner. During the period of development employees often select tasks they want to accomplish and create a net of relationships which can afterwards help them within selection of interesting projects as well as provide them with support and protection against useless risk.

Top period is inconsistent because many employees are still moving forward, although slower, but others experience crisis in their professional, as well as personal life and they are exhausted. There are employees who enter this period with the feeling of satisfaction and success and do not have a need to further move upwards in an organization. The basic questions throughout the top period is a way of how to keep efficiency and whether or not to become a mentor for trainees. Keeping efficiency and motivation of employees at mature age is complicated because for many people, opportunities for promotion are smaller and they have feeling that they have nowhere to move. A period when employees realize that they stagnate, they have reached their limits and there is no space for them in an organization to grow is called career plateau. This happens when elder employees lose their interest in another promotion or when younger employees have feeling they are blocked within their promotion because their senior is too young.

Retreat is a period usually emerging later in a person's life and is followed by retirement. Elder people belong among most underestimated group of employees, they are often considered as unable to adjust to changes, not willing to learn something new, less motivated. On the other hand, this group of employees can provide continuity in the case of organizational change, may serve as an example for younger colleagues.¹⁸ As a retreat may not necessarily come at a higher age, during the period of retreat there is opportunity for a new preparation and beginning of professional orientation.

¹⁸ Nelson, D.L. & Quick, J.C. (2007). *Organizational Behavior: foundations, realities and challenges*. 2nd edition. West Publishing.

In each period of career, interests and priorities of employees change. Based on this, organizations should provide their employees with different forms of help and different opportunities and possibilities.

Succession and replacement plan

Succession and replacement plans firstly request that the organization identifies and monitors key employees with high potential for the organization. These are employees who, according to the organization, have abilities as well as interest in having strategic position. It is important to cherish these employees, to have appropriate candidate who could replace the manager in case of his resignation.

Succession and replacement plans demand two forms of efforts from the organization:

- Identification and development of potential employees,
- Record of formal replacement tables.

Identification of key employees and potential managers for positions of middle and higher management is continuous. First of all, the organization pays attention to fulfil formal preconditions for a level of education and to performance. These employees get a chance to gain relevant work experience. Process of gaining work experience is also a test of whether they are able to work efficiently on a similar position or whether they fit the corporate culture. In many international companies the assumption of promotion is successful performance on the international position. They are as well given opportunity to develop other skills. The key employees must represent valuable and original human capital for the organization. Identification and continuous monitoring of the employees is a long term process taking part in cooperation with the present top management. It is a process which enables the organization to continuously slim the selection of successors on positions of top management to two or three candidates. In some organizations we speak about replacement planning which is a process in which top managers regularly control the potential of employees on a level under them and identify potential successors for vacant top position. Succession planning is a process in which we identify employees who could replace present managers as well as we identify space for development of these employees.

Recording of formal succession tables is realized in form of software or catalogues. These tables contain data about the present manager, his position, age and quality of performance. They also record a sequence of the most important successors for the given position, their performance and the fact whether they are ready and able to be promoted to a vacant position and how quickly they could fill the position.

4. Conclusions

From the individual's point of view it is not simple to build successful and satisfying career. The employees must evaluate their interests and priorities and they also have to act proactively and search for opportunities for education and development. These goals can be achieved if the employees:

- Find a job and an organization suitable for them, which offers them possibility to educate;
- Begin to develop experience, relationships and series of accomplishments;
- Focus on reaching goals of the organization instead of their personal ambitions;
- Seek opportunities which enable them to develop leadership competencies;
- Pay attention to whether they have the power not only formal signs of developing career.

Based on results published in renowned foreign scientific research thesis, papers, monographies, and books we can state that the issue of career building of managers and employees on all levels of managerial structures is extremely actual, severe and inevitable speaking of long term prosperity of organizations.

A significant number of companies working in agricultural sector now fight for survival and therefore the issue connected with development, education and career development of employees is postponed from the position of priority tasks to the back. The representatives of top management do not realize that gaps in this area will further deepen crisis in companies as well as in the sector.

Very interesting results were found in the category of small enterprises in which the owner or one of the owners works on a position of top manager. These subjects have exactly given system of competencies, elaborated plan for education and development of employees as well as plan of succession and replacement.

Except for interest in professional growth and development of the employees we identified realization of interesting social programs which positively influence motivation of employees.

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Security of intellectual capital of enterprises in the Slovak Republic

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Abstract

The intellectual capital represents knowledge and information of employees and managers inside the company and software. For better usage of all these information also information and communication technologies are necessary to keep, store and provide better decisions and prevent double work. Also these technologies and software must be protected because information held in some information system is sensitive and can be abused. This can be described as the knowledge capital of a company. Some companies must protect their intellectual property if they work with information which is very sensitive. Research in this paper is about how companies in the Slovak Republic, especially in the agrarian sector, secure about their intellectual capital. This research is based on the research conducted on the Department of Informatics on the Faculty of Economics and Management SUA in Nitra. The main research is focused on document Security policy, which can belong to intellectual capital of a company as a non-technical security tool for their information, ICT and information systems.

Key words: Intellectual capital, information, ICT, information security, security policy, company

JEL Classification: O34, O39

1. Introduction

It is well known that capital in some form is important for the whole company operation, because it is one of the three factors of production. The capital of an organisation or enterprise can be divided into several categories. Basically it consists of monetary resources, human capital, intellectual capital, etc.

Intellectual capital is the sum of everything everybody in a company knows that gives it a competitive edge. Unlike the assets with which business people and accountants are familiar – land, factories, equipment, cash – intellectual capital is intangible. It can be described as intellectual material – knowledge, information, intellectual property, experience – that can be put to use to create wealth. (Stewart, 2010)

Intangible (intellectual capital or IC) resources are now largely recognized by scholars and practitioners as the most important source of an organization's competitive advantage. At the corporate level, intangible investments (research and development or R&D, innovation, knowledge creation and fertilization, marketing and advertising expenditures) are now unanimously considered the most important sources of performance. (Bounfour, Edvinsson, 2012)

Measuring intellectual property is important so an organisation knows what it owns but it does not capture the processes required to reach the stage. Intellectual capital can be both the end

result of a knowledge transformation process or the knowledge that is transformed into intellectual property. The intangible resources of a company, a static notion, can be measured at any given time. Thus worker competencies (human capital), intellectual property rights (structural capital), customer satisfaction or agreements with suppliers (relational capital) would be considered under this category. All these forms of capital together represent the intellectual capital. Intangible resources can also be analysed in a dynamic sense. Companies are undertaking activities to acquire or internally produce intangible resources, to sustain and improve existing ones and to measure and monitor them. These dynamic activities thus imply an allocation and use of resources that are sometimes not expressed in financial terms and, consequently, may or may not appear in the corporate financial reports (Starovic, Marr, 2017)

According to these authors the intellectual capital represents information and data as intangible assets. For storage and use of these assets information and communication technologies are used. These technologies represent today inseparable part of company's assets – servers, information systems, personal computers, laptops, tablets, smart phones, etc. Proper protection of these technologies must be created and therefore the information security is essential.

Information security is a concept that becomes ever more enmeshed in many aspects of our society, largely as a result of our nearly ubiquitous adoption of computing technology. In our everyday lives, many of us work with computers for our employers, play on computers at home, go to school online, buy goods from merchants on the Internet, take our laptops to the coffee shop and check our e-mail, carry our smartphones on our hips and use them to check our bank balances, track our exercise with sensor in our shoes, and so on. Although this technology enables us to be more productive and allows us to access a host of information with only a click of the mouse, it also carries with it a host of security issues. If the information on the systems used by our employers or our banks becomes exposed to an attacker, the consequences can be dire indeed. (Andress, 2014)

As businesses have become more fluid, “computer security” has evolved into “information security”, or “InfoSec,” which covers a broader range of issues, from the protection from computer-based data to the protection of human knowledge. Information security is no longer the sole responsibility of a small, dedicated group of professionals in the company. It is now the responsibility of all employees, especially managers. Organizations must realize that information security planning and funding decisions involve more than managers of information, the members of the information security team, or the managers of information systems. Altogether, they should involve the entire organization, as represented by three distinct groups of managers and professionals, or communities of interest: Those in the field of information security; those in the field of IT; those from the rest of the organization. These three groups should engage in a constructive effort to reach consensus on an overall plan to protect the organization's information assets. (Whitman, Mattord, 2016)

Protection of information and information technologies as an inseparable part of intellectual capital can be divided in non-technical and technical protection. The non-technical protection consists of two important documents, which are the Security project and the Security policy. Also the basic knowledge or computer literacy of employers about information security and threats belongs in the non-technical protection. The technical protection represents hardware and software protection tools, e. g. hardware firewalls, antivirus and antis spam software.

Every organization must manage operational risk within the scope of its business model. The information security policy is the document that ties the business and information security together. A diligent information security risk assessment process makes effective risk

management possible. Information security policies should be leveraged as a business enabler. The information security policy should allow the organization to comply with all applicable legal, regulatory, statutory and contractual requirements and still operate with efficiency and effectiveness according to the organization's business plan. (Layton, 2016)

The researchers dealing with information security in agrarian sector are also Kollár, Polakovič, Gasperová (2016), Šimon, Huraj, Host'ovecký (2015), Oláhová (2006), Šilerová, Severová, Bendl (2011) and Tóthová (2006).

Education in informatics and information literacy is also important for proper protection of ICT, data and information on every level of schools – elementary, secondary and university. A sufficient education in informatics prepares people to work with ICT not only at work but also to have safer PC at home. Also the society requires adequate information literacy because of the development of information systems and ICT. Researches dealing with the topic of education in informatics in one of their works are Hallová, Záhorec (2014) and Polakovič, Slováková, Henneyová (2016).

2. Data and Methods

Research in this paper deals with enterprises in agrarian sector of the Slovak Republic their used information systems and software as a part of intellectual capital. Because the research was conducted on the Department of Informatics, Faculty of Economics and Management, SUA in Nitra, the main focus is on the information security of a chosen grange (anonym). In this specific grange the research was made for creation of the security document Security Policy. This document represents the basic non-technical security tool for every enterprise which deals with information, information systems, software data about employees, customers, business partners. In this specific grange this Security Policy document has been classified as an internal document.

3. Results and Discussion

With the cooperation of the grange the document Security Policy (SP) was created. This document contributes to higher information security for the grange on non-technical level. The SP consists of used information systems, information flows, powers and responsibilities, necessary particulars in case of information incidents and their proper solutions by qualified and competent employees.

The grange focuses on crop and animal production in order to achieve optimal diversification of agricultural production. Crop production consists of crops for feeding purposes – wheat, barley, triticale, and cash crops – rye, oil seed rape and potatoes. Animal production focuses on cattle breeding and milk production.

In the grange many software products are used for everyday work: accounting software Helios Orange, agronomic software Skeagis, TOPCON 7.5 – processing software for outputs from the GPS portable devices when agronomic work in tractors and DTM2009 - tracking software for preparing rations for cattle.

The purpose for which the SP was created is to mainly include scheduling renewal of software licenses and updates, schedule recovery hardware, responsibility, authority and communication in the event of a security incident. Very important is also to mandate an employee who is responsible for creation and updating of this document.

Security policy has different roles and respects the Slovak Republic legislation and by-laws of the grange. Threats for the information, data and ICT are better understand with the knowledge of sensibility of processed information. The SP defines security services – methods and manners

of data security on physical, organizational and logic level. Also it specifies the requirements for reliability and system availability, accessibility of resources, error detection and resistance to them. The main information flow in the grange is described. This information flow is important when and information incident occurs and the responsible person can quickly solve it.

The SP addresses the issue of staffing in the event of information flow and data processing. Security principles of personal policy define access of employees for secured information, ways of employee's authentication and requirements for professional qualifications and quality assurance of staff. Every employee of the grange or company must be familiar with the SP, its importance and their role in the meeting security challenges.

Physical protection of assets is also incorporated in the organizational policy of the SP. This physical protection of assets involves protection of assets of the grange, subjects of the control commission and chief economist competences. In this part of document also information assets are described – their classification, level of sensitivity, monetary and information value. Classification of information assets is significant to determine necessary protection.

Technical and operational support of safety is the last part of the SP. This module contains financial security purchase, implementation and operation of security mechanisms, requirements for service security operation and time plans for IS/ICT security resolutions. Management of the grange regularly plans and identifies necessary resources for proper security system of ICT and IS; successful realization of proper ICT/IS protection in line with objectives of the grange. This part of SP also contains manners of data backup, emergency situation policy and security policy audit.

The whole SP document is divided into 15 parts which are same in every SP. But each part contains exact information about the company for which this document is made for. These parts are:

1. List of terms and abbreviations
2. Characteristics of the enterprise
3. Used information systems
4. Security policy goals
5. Purpose of the security policy
6. Security policy tasks
7. Internal regulations of the company
8. Legal requirements
9. Sensitivity of the used information
10. Security threats acting on current information systems and ICT
11. Security services
12. Principles of personnel policy
13. Principles of organizational policy
14. Technical and operational support of safety
15. Final provisions

Table 1: Processed information and their level of sensitivity

Information	Processed in the IS	Processed with ICT	Level of sensitivity
Payroll	<i>Yes</i>	-	3
Mail registration	<i>Yes</i>	-	1
Billing (suppliers, customers)	<i>Yes</i>	-	3
Accounting (account balances, receivables, obligations, financial results)	<i>Yes</i>	-	5
Cash (cash vouchers)	<i>Yes</i>	-	1
Bank (conditions on bank accounts, bank statements, account numbers of suppliers, subscribers, employees)	<i>Yes</i>	-	4
Payroll (personal information of employees)	<i>Yes</i>	-	5
Animal store (movements of animals, ear numbers, stock)	<i>Yes</i>	-	3
Assets (states and movements of assets)	<i>Yes</i>	-	2
Agro interventions (information on wages)	<i>Yes</i>	-	3
GPS monitoring (vehicle tracking, diesel consumption)	<i>Yes</i>	-	2
Leases	<i>Yes</i>	-	5
GPS accurate guidance, vehicle tracking	-	<i>Yes</i>	1
DTM ration	-	<i>Yes</i>	1
Web cameras	-	<i>Yes</i>	1

Source: Own research and own processing

In this paper not every part of the SP can be described, therefore only the most important part is described. The ninth part of the Security policy document contains a table of information (previous page) used in the grange and their level of sensitivity. Level of sensitivity is rated on scale from 1 (least sensitive information) to 5 (most sensitive information).

These levels of sensitivity are important to devote a higher degree of protection for information used in the grange. With it also information assets are protected, which are not described in this paper as the grange stays anonymously. Information assets represent category of assets with which information are processed.

Also Cricelli, Grimaldi and Hanandi (2017) describe in their paper the importance of process technology and IT penetration for sustaining stability of structural capital, which is a part of Intellectual capital.

4. Conclusion

Intellectual capital, which consists of information technologies and information, must be protected by all available means. Tools of this protection are technical and non-technical. This paper was about the most important non-technical tool used for information security – the

Security policy document. Many enterprises today use this document, because it is prescribed by the norms that enterprises must have this document when they deal with sensitive information (about employees, customers, bank accounts, etc.). There is still a lack of enterprises in agrarian sector, especially granges, which do not use this document, although they also deal with sensitive data. For the research this document was made for a special grange in the Slovak Republic and therefore one more grange is better prepared for information security and dealing with security incidents in IS/ICT.

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Requirements Placed on Product Managers in the Context of Knowledge Management

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Abstract

The aim of the paper is to present partial results of an independent research, which long-term objective was to gather and analyse the information about the requirements that are imposed on candidates for the position titled Product Manager. An interdisciplinary approach was applied while looking into this subject, since both research into theoretical bases and analysis of the current state of topic and the tendencies of its development required work in several fields of study. In order to meet the research goal the content analysis method by Berelson was used, which made it possible to use the available job advertisements on the career portal monster.com to gather information regarding the requirements for product managers in the USA. The findings confirmed that employers are looking for workers possessing personal dispositions and skills of knowledge workers.

Keywords: knowledge worker, personality traits, productmanager, personality traits, skills

JEL Classification: D83, M12, M31, M51

1. Introduction

In an environment formed by deregulation, information network technologies, globalisation, consumer involvement, with an awareness and ability of consumers to have their voices heard, tough competition and other external forces, an ability to create and permanently innovate product portfolio is a highly complex and demanding task performed in many businesses by product managers. In the job role entitled “Product Manager” a role bearer must be able to take decisions in conditions of uncertainty more often than with many other professions intended for knowledge workers. Undoubtedly, he/she must have an adequate knowledge and skills and must also possess personal traits and qualities in order to be successful in their roles.

1.1 Theoretical Background

1.1.1 Marketing and Product Management

The role of marketing is defined and characterised by many authors (McDonald & Wilson, 2012; Kotler & Keller, 2013 and others) nevertheless, it has been repeatedly published in the last decade that the marketing loses its influence on the decisions taken by top managers (Verhoef & Leeflang, 2009; Kumar, 2008), despite the fact that a new formulation of the marketing paradigm (Achrol & Kotler, 2012) has been developed. An improved focus on information, on relationships and orientation at process approach to satisfying needs of customers which covers the whole supply chain network in addition to the organisation as such, are clear attributes of the paradigm where the marketing function fulfils its mission; for more details see Tomek and Vávrová (2011).

The marketing function can be organised in different manners, and Kotler and Keller (2013) are of the opinion that the organisation by products and brands – product management – does not necessarily need to substitute the functional organisation, but rather serves as an extra level

of control. Product managers are responsible for analytical, planning, budgeting and execution activities. In principle, it is expected that these managers manage their parts of product portfolio they have been entrusted with, both on the strategic and tactical-operational level and that they participate in the process of new product development (Lehmann&Winer, 2005; Kotler & Keller, 2013). In innovative companies, the product manager is more often a member or leader of a cross-functional team. In such companies, the role of a product manager is an example of a function oriented towards the beginning of the value chain which is characterised by taking strategic decisions (Gorchels, 2011).

1.1.2 Intellectual Capital and Knowledge Management

The intellectual capital that can be defined for the purposes of this paper in accord with Subramaniam and Youndt (2005) as a sum of knowledge which is available to the organisation and that can be used to create and sustain competitive advantage represents a set of intangible assets. The intellectual capital is usually divided into structural capital and human capital. According to Bontis (1999 in Armstrong, 2012), human capital represented by skills, intelligence and experience of people is what gives organisations their unique character. Ulrich (1998 in Armstrong, 2012) put the human capital into the list of problematic issues in the area of competitiveness, because it is hard for the firms to find, adapt, remunerate and maintain the human capital in the form of talented individuals that they need to be drive global companies responding sensitively both to their customers and continuous advancements in technology.

Knowledge management and human capital are closely related, as knowledge is one of the attributes of the human capital. Explicit knowledge is knowledge that can be easily documented, stated and transferred, as opposed to tacit knowledge that is tied to a person having such knowledge available (Nonaka& Takeuchi, 1995 in Noe et al., 2016). According to Nonaka and Takeuchi (1995 in Mládková, 2004), workers having the knowledge may be all employees of the organisation with sufficient knowledge who are able to apply it at the right time, however Mládková (2004) elaborates that the main characteristics of a knowledge worker is that while working he/she creates, distributes and applies the knowledge and adds that it is hard to manage staff with tacit knowledge. In case of knowledge workers, the activities in the process of recruitment and selection must be conceived as activities of strategic meaning, as they entail an acquisition of a source of intellectual capital, which is a notion commonly shared in professional circles(Armstrong, 2012; Noe et al. 2016).

1.2 Purpose and Objectives

The aim of this paper is to present partial results of own empirical research project and to connect them with knowledge base concerning the knowledge management and human factor in product management. The presented paper focuses on knowledge, abilities, skills and personal traits required from the candidates for “Product Manager” positions. It represents a set of requirements placed on them and discusses their correspondence with findings arising from the studies of secondary sources.

The empirical research is designed to test the assumption that the business practice views product managers as knowledge workers.

2. Data and Methods

When resolving the issue, an interdisciplinary approach was applied as both understanding the theoretical background and analysis of the current situation regarding the problem and the tendency of its development required research in multiple professional disciplines. When performing the empirical research itself, the method of content analysis according to Berelson

(1954 in Gavora, 2000) was applied. The method is suitable for collection a lot of information from available recruitment advertisements placed on candidates for a key position in the product management regarding the requirements and psychological demands. When researching advertisements for free vacancies in three selected states of the USA (Illinois, New York and California) the main selection criteria of the source of information were its availability and ability to present requirements for candidates and information of the vacancy in the broadest scope possible. In four weeks in October 2015, 100 advertisements for positions entitled as “Product Manager” were gathered from publicly available advertisements on Monster.com career portal. If the position had a different title, such as “Junior Product Manager”, the advertisement was not included in the set. The data processing was performed in line with the procedure applied in the thesis by Wroblowska (2011) and elaborated on in other papers and monographs of the author (Wroblowska, 2016a; 2016b; 2016c), which allows for international comparison. The data segments were transferred in an electronic form. The work with the transferred texts was subjected to the so-called manifest content analysis according to Plichtová (1996 in Miovský, 2006) when only the explicit content of the text is examined.

3. Results and Discussion

In this chapter, the results related to the purpose and objectives of this paper will be presented and discussed. Additional results of the research project are presented either in the monograph of the author (2016a), or published in scientific papers (Wroblowska & Ruda, 2015; Wroblowska, 2016b; Wroblowska, 2016c). For the analysis and discussion, requirements with cumulated frequency exceeding 25% were sorted. The results are presented in a form of frequency chart in Table 1.

It is clear from Table 1 that to define psychological requirements, the advertisers used terms defining psychological dispositions or traits, as well as terms from the field of competencies (such as leadership) and performance dimensions (such as interpersonal skills).

As is given in Chapter 2, the suitability of the method of content analysis has been repeatedly verified. However the selection of the data source can be discussed. Even though, a recommendation by a trustworthy source can seem to be the most suitable method of recruitment of the candidate, as mentioned by Noe et al. (2016), advertisements are omnipresent in the recruitment process, with career portals and websites of employers being the most common tools. The choice of Monster.com career portal was determined by its popularity and global recognition of this job portal.

Table 1: Requirements and psychological demands for a candidate for the position of „Product Manager“

rank	KNOWLEDGE AND APPLIED SKILLS	abs. frekvency	rel. frekvency
1	University degree achieved	100	100,0%
2	Communication skills/ability to communicate well	74	74,0%
3	Expertise aligned with a company business	58	58,0%
4	Analytic thinking/analytic abilities	55	55,0%
5	Knowledge of product management	52	52,0%
6	Team player/ team work ability	36	36,0%
7	Information technology application	34	34,0%
8-9	Organizational and coordination skills	33	33,0%
8-9	Communication skills/ability to communicate well	33	33,0%
10	Ability to handle multi-tasking	32	32,0%
11	Strong interpersonal skills	29	29,0%
12-13	Ability to set priorities	25	25,0%
12-13	Ability to solve problems	25	25,0%

Source: own research

Lehmann and Winer (2005) recommended marketers for succeeding in the role of product manager obtaining desirable level of selected competencies and possessing of an ability to cooperate with others and high level of communication skills. The research in the field of secondary data was more successful when the product manager was explicitly in the role of a horizontal team leader responsible for new product development process. Ching-Thorng et al. (2015) examined formal authority, informal influence of product managers and other circumstances and factors that may have an impact on the process of new product development and discussed the benefits of the knowledge management concept for constituting an innovative team. In their paper, they repeatedly used the term of the work role “heavyweight-product manager”, taken over from the study performed in the automotive industry in the beginning of 1990s that was reminded to Czech readers by Wroblowska (2016a). The authors extensively presented current knowledge of the role of product managers who enter the process of new product development already in the early design stages and emphasized that the bearer of such role must have a high level expertise which is being permanently developed, authority of a “decision-maker”, and many more qualities.

If we disregard the 100% occurrence of a requirement for a university degree when 22% of advertisers also included a preferable requirement “Ph.D.” or “MBA” is an advantage”, the research findings, namely the focus on communications skills (74%) and the orientation in the field of the advertiser’s business(frequency of occurrence of 58%), show that the presented data confirm both of the cited resources above. They also prove the relevance of the designation of product managers as typical representatives of knowledge workers who must have an intrinsic motivation and a whole set of traits, abilities, and skills of an creative individual in addition to the expertise in the field, for more details see Franková (2011).

In the set of ten general competencies that were established by the research of the American Society for Human Resource Management in cooperation with the National Manufacturing Association presented by Casner-Lotto and Barrington (2006 in Noe et al., 2010) the "ability to work in a team" was the third most frequent requirement, with the second being the command of information technologies and with the top requirement being "ability to solve problems and apply of critical thinking". Even though, the requirement formulated explicitly by the “ability

to solve problems” was present in the sample of advertisements only in 25 cases, we may infer that the requirement that the candidate would have this competency was partially suppressed by requirements that the candidate would possess an ability to make quick decisions, to apply critical thinking, logical, analytical and creative abilities, organisational skills (including an explicitly expressed requirement for ability to prioritise) that were also identified in the advertisements.

4. Conclusion

The results and their partial examination were passed onto educators, providers of professional training of future product managers, but are also intended to experts in the field of recruitment, education and development in business practice. The research, in which the method of content analysis of recruitment advertising texts for the position of “Product Manager” was applied, showed that considerable demands are placed on candidates for this position with regard to their education, professional knowledge and skills, as well as the so-called soft skills and personality traits. The presented results confirm that the specification of the requirements placed by the advertisers in the USA on product managers, measured at the level of first approaching the candidates for these positions is in line with the assumptions of the author and findings and opinions of other professionals, and have a potential to open a discussion over readiness of university graduates for this work role.

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***SESSION 3 Corporate Social Responsibility, Business Ethics and Sustainable
Development
Agribusiness and Sustainable Development***

Environment Sustainability through Organic Farming Practices in India

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Abstract

Farming in India has been a centuries old practice and has been the very basis of origin of civilization in India. Farming practices have evolved significantly since all this time while technology has played a vital role in shifting the traditional agriculture to modernized agri-business. However, the world has started taking a wider view of the harm that is being caused to the environment with continuous chemical use and exploitation of natural resources due to the exclusive commercial motives. Therefore, a need has arisen to follow methods that are not only environment friendly but also sustainable for our future generations. The world is, hence, moving back to the traditional farming practices through adoption of Organic Farming. The research paper emphasizes on the concept, importance and need of Organic Farming. It also emphasizes on the role of Govt and various Non-Govt agencies in adoption of organic farming in the country, particularly in the state of Punjab. Data has been collected from both primary and secondary sources. The research reflects that there has been a significant increase in the Organic Farming practices in the area. However, there is a need for taking steps to increase the level of awareness among farmers to adopt Organic farming as a practice for sustainable development.

Keywords: Organic Farming, pesticides, bio fertilizers, microfinance, genetically modified crops

JEL Classification: Q50, Q57

1. Introduction

1.1 India: Agrarian Economy

Since Independence, India has flourished significantly in secondary and tertiary sector. However, the economy and the livelihood of people largely depends on the primary sector even today. Primary sector includes all the activities that are directly related to the use of natural resources. Therefore, it includes agriculture, fishing, mining, animal husbandry and the like. Agriculture in India got a boost during the 20th century, due to the policy of Green Revolution, particularly in Punjab and Haryana. Green Revolution is a concept that involves extensive use of fertilizers, pesticides, high yielding crops and mechanized form of agriculture. No doubt, it rocketed the production levels of crops and was an instrumental step forward to make the nation self-sufficient in terms of food supply. And indeed, it was a huge success.

However, with the passage of time and excess use of chemicals, the health of the soil has been deteriorating over years, thereby a larger area becoming non-cultivable and infertile.

1.2 Research methodology

The research paper is descriptive and focusses upon the need of organic farming, the awareness about its practices and future prospects. Focus group discussions and content analysis using thematic evaluation was carried out to draw results. Government Organisations, like the Grameen Bank, Malwa, Punjab, Agriculture Office, NABARD and Punjab & Sind Farmer's Training Centre were contacted and interacted, along with an interaction with rural farmers across Punjab. Data was used from secondary sources like the FiBL world survey report, Government and Non-Government websites and existing literature on organic farming.

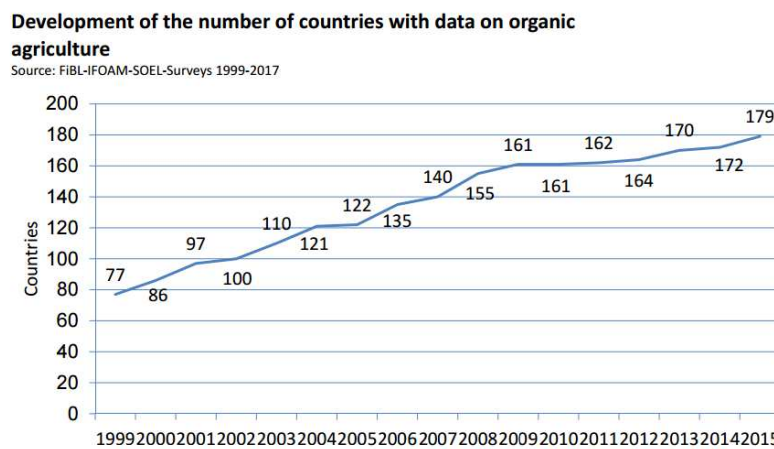
1.3 Organic Farming

1.3.1 Organic Farming: Concept

Organic farming, as a concept, involves farming without use of chemicals like insecticides, pesticides, fertilizers and other agro chemicals. It aims at cultivating land in a manner where the soil is preserved against harmful chemicals, organic waste like animal and farm/crop residue, aquatic waste are used to keep soil in a healthy state. Biofertilisers, i.e living microorganisms are used to provide necessary nutrients to plants.

Organic farming, as a practice, is not a new concept for India. India has been involved in organic forms of agriculture ever since though the practices eventually transformed into greater use of contemporary techniques.

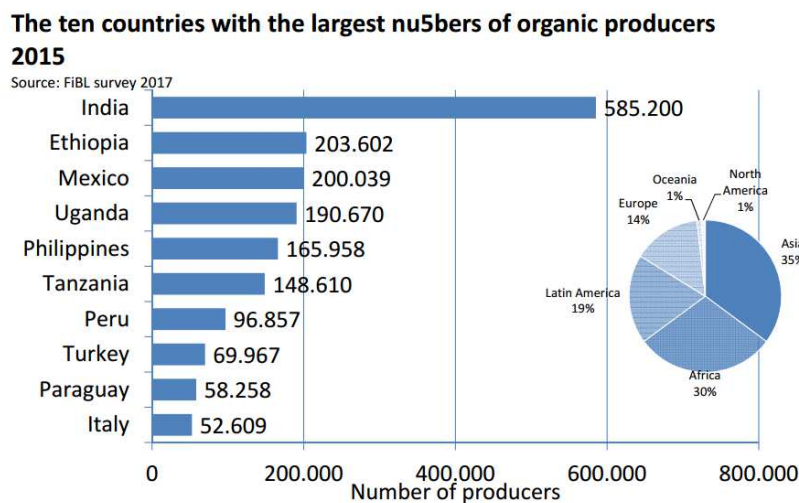
Figure 3: Growing number of Countries going 'Organic'



Source: FiBL-IFOAM World Survey, 2017

As per the Report of Organic Agriculture Worldwide 2017 by Research Institute of Organic Agriculture (FiBL)^[1], the country with the most organic producers is India (585'200), followed by Ethiopia (203'302) and Mexico (200'039). The figure below, shows the top ten countries with largest number of Organic Producers.

Figure 4: Countries with largest no. of Organic Producers



Source: FiBL-IFOAM World Survey, 2017

As per the FiBL survey 2017, considering the key indicators of Organic Farming, the number of IFOAM affiliates 2016 have been found to be 833 affiliates from 121 countries. Where, Germany has 91 affiliates, India has 73 affiliates, China has 55 affiliates and United States have 49 affiliates. International Federation of Organic Agriculture Movements (IFOAM) is an international body organized for promotion of organic agriculture worldwide.

1.3.2 Organic Farming In India: Need

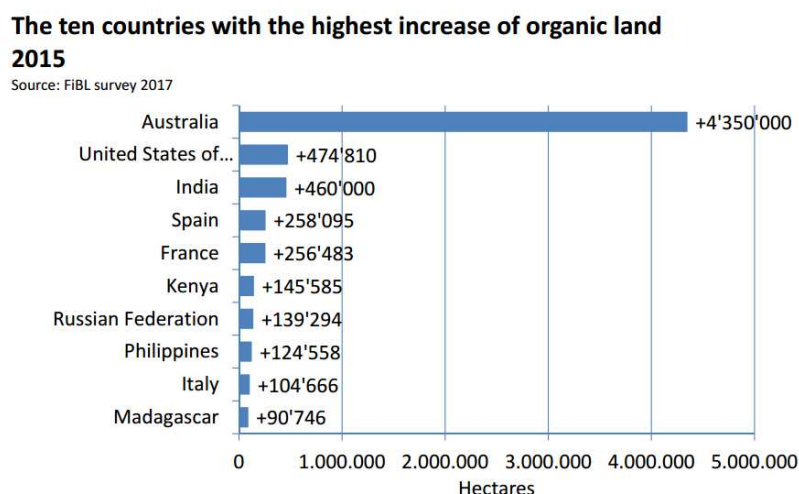
Decades ago, when the nation was fighting with the challenge of inadequate food supply and hunger, Green Revolution came up as a powerful tool to tackle with the problem and helped the economy attain food sufficiency. It played an instrumental role in boosting the amount of crop production to an extent where the economy, not only became self-sufficient in food production, but started exporting crops.

However, it had led to several problems, ranging from the soil becoming infertile to the deteriorating health of people exposed to the harmful chemicals. Excessive use of pesticides have led to contamination of the environment, hence causing serious health problems to farmers particularly, and the effect also trickles down to the people associated with the chemical indirectly. The Malwa region of Punjab, declared as ‘Cancer Belt of India’, is so because of the same reason. The region in the south-west of Punjab grows cotton and uses almost 75% of the pesticides used in Punjab.

Green Revolution focused on large scale production of a single or two crops, as against traditional farming where farmers planted a variety of crops, hence the existence of a larger supply of various unique genotypes. Therefore, it has also led to a loss of genetic diversity of plants. Under the promotion of Genetically Modified Crops, It has also largely affected the fertility of soil. While, GM crops have eventually been turned out to be very harmful for consumption and for the environment as well.

Keeping the consequences in mind, Govt has taken several steps to promote safe farming practices and a greater emphasis on avoiding usage of chemicals in farming. Hence, Organic farming is taking a step ahead and being adopted by various nations at a fast pace.

Figure 5: Countries with highest increase in Organic land



Source: FiBL-IFOAM World Survey, 2017.

As per the World Survey Report by FiBL, India has a 3rd highest place in increase of organic land, the first being Australia, followed by USA.

1.4 Role Of Government

1994- Sevagram Declaration for promotion of Organic Agriculture in India.

2001- National Program on Organic Production (NPOP) was set up as the Regulatory Framework.

2001- National Standards for Organic Production were set for Organic Agriculture along with setting up of National Accreditation Body with Agriculture and Processed Food Products Export Development Authority as nodal agency.

2002- Indocert with SECO and FiBL(Research Institute of Organic Agriculture) for certification of Organic Agriculture

2005- First organic trade fair organized by ICCOA in Bangalore.

Till date, there are 24 Organic Certification Bodies accredited under NPOP.

1.5 Role of Non-Government Organizations

Various non-governmental institutions have been involved in promotion of organic agriculture all over India. Punjab, in particular, has numerous NGOs working for Organic Agriculture, though only a few are operational and effective. Kheti Virasat Mission, established in 2005, focusses primarily to eliminate the effects of chemical fertilizers on the farm sector. NGO, EcoSikh recently collaborated with US based NGO, 'Living Successful Foundation' and conducted workshop in the Ferozpur District of Punjab. Around 100 farmers attended the workshop and it had an objective of spreading awareness about eco-friendly practices and handling queries of farmers.

1.6 Organic Farming In India: Benefits

Organic Farming is being largely adopted due to the benefits that it provides to the farmers, as well as the community and environment in general. A few of the merits of organic farming are listed herewith:

- Reduction In Greenhouse Emissions
 - Organic Farming is an effective tool to reduce agricultural greenhouse gas emissions by allowing plants to absorb atmospheric carbon dioxide through photosynthesis and the same get stored as carbon in biomass and soil, referred to as Carbon Sequestration.
- Minimum Dependence On Chemical Inputs
 - Organic farming adopts techniques and methods that free of harmful chemicals, while using modern techniques to improve yield of the produce.
- Employment Generation
 - Organic farming boosts rural employment as it is highly labour intensive, hence providing livelihood to many rural households.
- Quality Improvement
 - The long term quality of resource base is improved through adoption of the practice of Organic Farming. It recycles the organic matter and improves the nutrient cycle, hence improving the health of the soil and improving the quality of resource in general.
- Better Human And Animal Health

- Organic produce eventually helps in rolling back the effect of chemical farming practices, and helps with an improvement in health conditions.

1.7 Organic Farming in India: Challenges

Though Organic farming in itself is a brilliant concept and leads to innumerable advantages, but it faces its own challenges depending upon a country's economy, ecology, topography, climate and the like. Apart from this, one of the major challenge in front of Organic Farming is the lack of authentic and credible research in the field of Organic Farming. There is, therefore, an absence of models of organic farming that are technically developed to suit the present day requirements and conditions.

2. Sustainable Development

One of the fundamental principles of the Human Development Goals, is sustainable development. It is a concept that promotes economic and structural development without compromising on the needs of the future generations. It lays a greater emphasis on avoiding depletion of natural resources by using ways and means that are eco-friendly.

2.1 Role of Organic Farming

Organic farming, can be referred to as sustainable agriculture, as it is a practice that along with producing the targeted quantity of crops, takes care of the environment, health of citizens and animals, and human societies.

Organic Farming involves crop rotation, mixed cropping, using manure and organic waste as bio-fertilizers and adhering to eco-friendly techniques. It lays significant stress on soil and water management through efficient use of resources and recycling of nutrients. It also helps prevent soil and water pollution that is caused by reckless use of chemicals.

3. Future Prospects

Organic farming, undoubtedly, has manifold benefits ranging from soaring farmer incomes due to an increased demand for organic produce, to the conservation of natural resources, especially, soil regaining its fertility through natural agricultural practices.

However, the biggest challenge for Organic Farming is the rising need for an increased agricultural produce, with growing population. Going Organic, cuts the cost of farmers to nearly half, as it does not involve purchase of expensive chemical inputs. Thereby, affecting the standard of living of farmers and their families in a positive manner.

Numerous Government schemes and support are available for farmers to adopting organic farming practices. Along with necessary training, they are also given subsidies and a minimum support price for their produce. Hence, the scope of organic farming is going to significantly increase in the near future.

4. Suggestions

To make Organic Farming all the more beneficial and sustainable, it is advisable to:

- Promote research and development in the area of Organic farming. Thereby, creating innovation in technology and processes to push the production level without affecting its concept of sustainability.
- Make training to farmers accessible in greater areas, so as to promote the practice of Organic Farming and help farmers reap the optimum benefits out of the practice.
- Increase awareness among farmers and people, in general, about various benefits of organic farming, hence generating greater demand for organic products in the market.

- Provide support services to farmers, pre-harvest and post-harvest, so as to correct their shortcomings and boost their morale.
- Check soil health on a regular basis to see the after effects of going organic, hence committing to the practice.

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The influence of selected agricultural projects on agricultural market access and production change in the republic of Armenia

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Abstract

The Government of The Republic of Armenia considers agriculture as one of the important sectors in the country and operates number of strategies that are designed for agriculture and rural development. One of them is close cooperation with international development institutions, as they assist to agricultural development in country by means of agricultural based projects. This article is about the study of the four projects financed by four international institutions i.e. EU, FAO, ACDI/VOCA, and WB. These projects have been focused on the increase of crop production in farms, to gain more knowledge and experience on the agricultural and rural development fields, as well as to be more competitive. In frames of this research, questionnaire survey has been created which was tailored to project beneficiaries' circumstances. Using hierarchical multiple regression analysis it is illustrated that how variables like easiness to market access, agricultural production change and income change are affected by other variables.

Keywords: Agriculture, Agricultural Project, Market Access, Poverty Reduction, Rural Development.

JEL Classification: M10, Q19

1. Introduction

This article is dedicated to the research of agricultural and rural development projects and their components financed and implemented by international organizations in the Republic of Armenia. Armenian total population is around 3.0 million, from which the total rural population represents 35.89 % (Indexmundi, 2011). Therefore, agricultural and rural projects are considered as important drivers of development, as they provide the inputs for agricultural development, help to the export's increase, and contribute the food security and food safety. Although this sector has the declining trend, agriculture and rural development remains the direct and indirect base for the improvement of economic livelihoods of the majority of Armenian, as well as the world's population.

For the purpose of this research were analyzed four projects provided by following international organizations and one national/voluntary organization: European Union (EU), Food and Agricultural Organization (FAO), World Bank (WB) and Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance (ACDI/VOCA). In general the direct beneficiaries of the agricultural based projects in Armenia are the community members i.e. farmers. The key objectives of the aforementioned projects were linked to the livelihood improvements, to the farmers' support in order to be more productive, to be better informed or to gain new knowledge and experience, as well as to implement new advanced methods and progressive technologies in agriculture and rural development, etc.

In frame of this research was developed and undertaken questionnaire survey into which had been involved 100 direct beneficiaries. The questionnaire tailored to the project direct recipients

helped in this research to carry out in depth analyses of the projects' outcomes and their impact. For this purpose were applied two single equation models in order to analyze variables extracted from the questionnaire.

The general objective of this article is to analyze from impact point of view the selected four projects and their components, delivered by above mentioned organizations with intention to determine relationship of income change of beneficiaries with other studied variables after project implementation. Furthermore, the objective is also to analyze the influence on beneficiaries' agricultural production change and easiness of market entry. With intention to support the above mentioned objectives three following hypotheses had been set up:

H1: After participation in projects, there is bidirectional positive significant contribution between easiness to market access and income change.

H2: After participation in projects, there is positive significant contribution on easiness to market access.

2. Literature Review

According of a Turner (2008) a project is a temporary organization with assigned resources to do work in order to deliver beneficial changes. Cleland (2004) also deals with substance and purpose of projects, he writes that projects provide an organizational focus on conceptualizing, designing, and creating new or improved products, services, and organizational processes. According of this author project has to be effectively completed, in order to assure the beneficial changes for recipient. With projects inputs, outcomes, outputs and their impact on the beneficiaries 'efficiency dealt in scientific literature other authors. Interesting is observation of Fortson et Al (2012) who in relation to the intangible inputs declared, that they do not have significant impact on the beneficiaries' efficiency in the case of projects. On the other side, the experience of FAO is more optimistic with regard of the intangible resources. FAO implemented in developing countries FAO-EU Food Facility Program as the consequence of the high food prices and the global economic downturn from 2008 to 2010. In frame of this program, had been delivered diverse tangible and intangible inputs. There is sound evidence that investing into the agriculture and nutrition had had immediate positive effect on the countries with acute problems in this field (FAO, 2013). However, it should be highlighted that agricultural based risks are associated with negative outcomes stemming out from imperfectly predictable biological, climate, and price variables (WB, 2006).

Other group of authors and organization (Helms, 2006, Sanghera, 2006, FAO, 2009), deals with outputs of the projects both tangible and intangible. First listed author claims that project outcomes are always tangible and intangible. Whether or not, the desired improvement in productivity is outside of the project scope, therefore the active involvement of direct beneficiaries into the project implementation is utmost important. Sanghera (2006) states that the result is typically knowledge related outcome, for instance the results of an analyses performed in a research project.

Amrouk, N. et Al (2013) deal with success of the project. According of these authors the key factor, which is ensuring the success of a project, is, if the gains can be sustained beyond the lifetime of the project. The gains are more sustained if the beneficiaries are relying on more than a single commodity.

In general, from the above cited works is stemming out that for project success is important its follow-up and active participation of direct beneficiaries who will be able to further develop the bases established by project in favor of increased production, to achievement of better

quality and to finalization of products with increased overall effectiveness.

3. Data and Methods

During the research, the questionnaire was developed which helped to assess the selected projects. Total 100 questionnaires have been filled out. Collection of the data was based on face-to-face interviews. The participants were from 34 different communities located in four different regions in Armenia. In this research were estimated the values of relationships with different parameters and tested the hypothesis. More specifically have been carried out relationship and hierarchical; multiply regression analysis.

In research, are used categorical variables, specifically dummy, nominal, and ordinal. There had been applied three single equation models in order to analyze variables extracted from the questionnaire. The dependent variables in two cases are for Model 1: Income change, for Model 2: Easiness to market access. With intention to increase the accuracy of results had been entered several control variables, which are related to the dependent variable, from which some of them were transposed as dummy variables. By this, have been removed their effects from the equations. For the equations, the coefficients (the β 's) are nonrandom but unknown quantities and ε_i error term. In each Model, are 10 explanatory variables.

Model 1

$$IC_i = \beta_0 + \beta_1(ATI)_i + \beta_2(AIT)_i + \beta_3(MQ)_i + \beta_4(MA)_i + \beta_5(APC)_i + \beta_6(2S)_i + \beta_7(3S)_i + \beta_8(4S)_i + \beta_9(4PS)_i + \beta_{10}(CLO)_i + \varepsilon_i$$

The main objective of this model is to observe the impacts the explanatory variables on income change.

Model 2

$$MA_i = \beta_0 + \beta_1(ATI)_i + \beta_2(AIT)_i + \beta_3(MQ)_i + \beta_4(IC)_i + \beta_5(APC)_i + \beta_6(2S)_i + \beta_7(3S)_i + \beta_8(4S)_i + \beta_9(4PS)_i + \beta_{10}(CLO)_i + \varepsilon_i$$

The main objective of this model is to observe the impacts the explanatory variables on easiness to enter market.

These single equations models were estimated using hierarchical multiple regression method. The relationship analyses were carried out using SPSS as the analytical tool.

4. Results

As it is above mentioned for the purpose of this research was used hierarchical multiple regression, in order to estimate the three models. Following set of tables is showing the estimated results for Model 1, they are presented in the following set of tables 1-3.

Table 1: Hierarchical Multiple Regression for Model 1 Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.350 ^a	.122	.085	.47584	.122	3.312	4	95	.014
2	.702 ^b	.493	.410	.38219	.371	6.226	10	85	.000

Source: Own results

Note:

^a. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm,

Gender DV, Age

b. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age, FourPsupportersDV,

Threesupporters DV, Foursupporters DV, AgrIntangInput DV, Market access DV, Twosupporters DV, How much cultivated land you own? (ha),

AgrProdChange DV, MoreQualified DV, AgrTangInput DV

c. Dependent Variable: Incomechange DV

Table 2: ANOVA^c

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3.000	4	.750	3.312	.014 ^a
	Residual	21.510	95	.226		
	Total	24.510	99			
2	Regression	12.094	14	.864	5.914	.000 ^b
	Residual	12.416	85	.146		
	Total	24.510	99			

Source: Own results

Note:

a. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age

b. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age, FourPsupporters DV,

ThreesupportersDV, FoursupportersDV, AgrIntangInputDV, MarketaccessDV, TwosupportersDV, How muchcultivatedlandyouown?(ha), AgrProdChange DV, MoreQualified DV, AgrTangInput DV

c. Dependent Variable: IncomechangeDV

Table 3: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.176	.343		.512	.610		
	Age	.001	.005	.025	.252	.801	.944	1.059
	Number of family members involved in the work of the farm	-.035	.039	-.088	-.911	.365	.996	1.004
	Gender DV	.201	.103	.191	1.950	.054	.968	1.033
	EvaluationDV	.385	.127	.299	3.043	.003	.958	1.043
2	(Constant)	-.074	.294		-.252	.802		
	Age	.000	.005	-.009	-.101	.920	.831	1.204
	Number of family members involved in the work of the farm	-.015	.035	-.037	-.430	.669	.797	1.254
	Gender DV	.185	.093	.176	1.984	.050	.762	1.313
	EvaluationDV	-.007	.122	-.006	-.061	.952	.670	1.493
	How much cultivated land you own? (ha)	-.021	.029	-.065	-.739	.462	.775	1.291
	AgrTangInput DV	-.011	.120	-.010	-.090	.929	.487	2.055
	AgrIntangInput DV	-.065	.146	-.040	-.446	.657	.756	1.322
	MoreQualified DV	.468	.113	.378	4.131	.000	.710	1.407

Market access DV	.246	.089	.248	2.759	.007	.740	1.352
AgrProdChange DV	.284	.088	.284	3.217	.002	.765	1.308
Twosupporters DV	.039	.110	.037	.355	.724	.534	1.873
Threesupporters DV	.067	.226	.027	.298	.767	.743	1.345
Foursupporters DV	.099	.245	-.034	.404	.688	.834	1.199
FourPsupporters DV	.766	.405	.154	1.891	.042	.898	1.113

Source: Own results

Note:

a. Dependent Variable: IncomechangeDV

After looking on R square values of the variables, it was found out that they account for about 12 % of variance in the outcome. This means that control variables comes for about 12 % variability of the outcome. The R square from the second row shows that the model as a whole can predict about 49 % of variability of the outcome. While looking on R square change, it can be stated that after the effects of control variables have been statistically controlled the predictive variables which explain additional about 37 % of variance in outcome.

Stemming out from ANOVA table it can be concluded that null hypothesis can be rejected, so the model has explanatory power, or this can be interpreted that predictor variables can help to predict the dependent variable, which in the Model 1 is income change. Furthermore, there is no strong correlation among independent and control variables, so there is no multicollinearity problem.

According to significance level, it can be stated that the coefficients of change in agricultural production, increase of qualification and market access after participation in projects, make statistically significant contribution on income change. Also, increased qualifications achieved by beneficiaries during their participation in projects, is positively affecting their income change. The same statement is as well valid about higher possibilities for market access and change in their agricultural production after project implementation.

In addition, it is seen from the Set of Tables 1 that variable - beneficiary who has more than one supporter (number of involvement into the projects), is positively affecting variable income change. Therefore, according to results obtained from the first model there was considered a positive and significant contribution of predictor variables on income change of beneficiaries after their participation in projects.

The next set of Tables 4-6 is showing the estimated results for Model 2. In this set of tables, we took easiness to market accesses as a dependent variable.

Table 4: Hierarchical Multiple Regression for Model 2 Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.323a	.104	.066	.48311	.104	2.761	4	95	.032
2	.566b	.321	.209	.44467	.217	2.713	10	85	.006

Source: Own results

Note:

a. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age

b. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age, FourPsupporters DV,

ThreesupportersDV, FoursupportersDV, AgrIntangInputDV, IncomechangeDV, Howmuchcultivatedlandyouown? -inha, TwosupportersDV, AgrProdChange DV, MoreQualified DV, AgrTangInput DV
c. *Dependent Variable: Market accessDV*

Table 5: ANOVA^c

	Model	Sum of squares	Sum of Squares	df	Mean Square	F
1	Regression	2.578	4	.644	2.761	.032a
	Residual	22.172	95	.233		
	Total	24.750	99			
2	Regression	7.943	14	.567	2.869	.001b
	Residual	16.807	85	.198		
	Total	24.750	99			

Source: Own results

Note:

a. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age

b. Predictors: (Constant), Evaluation DV, Number of family members involved in the work of the farm, Gender DV, Age, FourPsupporters DV,

ThreesupportersDV, FoursupportersDV, AgrIntangInputDV, IncomechangeDV, Howmuchcultivatedlandyouown? (ha), TwosupportersDV, AgrProdChange DV, MoreQualified DV, AgrTangInput DV

c. *Dependent Variable: Market accessDV*

Table 6: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.312	.348		.896	.372		
	Age	.000	.005	.002	.016	.988	.944	1.059
	Number of family members involved in the work of the farm	-.034	.039	-.085	-.878	.382	.996	1.004
	Gender DV	.040	.104	.038	.387	.699	.968	1.033
	Evaluation DV	.402	.128	.310	3.128	.002	.958	1.043
2	(Constant)	.088	.342		.258	.797		
	Age	-.002	.005	-.040	-.406	.686	.832	1.202
	Number of family members involved in the work of the farm	.018	.040	.045	.448	.655	.797	1.254
	Gender DV	-.095	.110	-.090	-.860	.392	.734	1.362
	EvaluationDV	.195	.140	.151	1.395	.167	.685	1.460
	How much cultivated land you own? (ha)	-.014	.033	-.042	-.411	.682	.771	1.297
	AgrTangInput DV	.261	.136	.240	1.913	.039	.508	1.970
	AgrIntangInput DV	.003	.171	.002	.019	.985	.755	1.325
	MoreQualified DV	.079	.144	.063	.545	.587	.594	1.684
	AgrProdChange DV	.105	.108	.105	.973	.333	.689	1.451
	Twosupporters DV	.111	.127	.107	.874	.385	.538	1.859

Threesupporters DV	.372	.260	.146	1.429	.037	.761	1.315
Foursupporters DV	.062	.286	.021	.216	.829	.833	1.200
FourPsupporters DV	.318	.480	.064	.663	.509	.866	1.154
Incomechange DV	.334	.121	.332	2.759	.007	.552	1.812

Source: Own results

Note:

a. *Dependent Variable: Market accessDV*

From the set of Tables 2 it is seen that 10 % of total variability in easiness to market access dependent variable after participation in the projects is explained by the model, or by predictor variables. However, the model as a whole can predict about 32 % of variability of the outcome and consequently it can be concluded that after the effects of used control variables have been statistically controlled predictive variables, which explain additional 21 % of variance in achieved outcome. In the set of Table 2, F test proves that the model 2 has an explanatory power. According to significance level, it can be stated that the coefficients of income change, three supporters and tangible agricultural inputs variables after participation in projects make statistically significant contribution on easiness to market access. Income change variable's contribution to easiness to enter the market is acceptable as for instance beneficiaries' income raise could result to the expansion of their products into the new markets, or to the investment into the enlargement of production, advertisement or other marketing and markettools.

According of the research results, tangible inputs as a significant contribution to market access are more important than intangible. This explains the idea, that from the farmer's point of view the intangible inputs such as trainings, booklets, guidelines or elaborated concepts or strategies, provided in frames of the projects are not considered to be so important as the tangible inputs such as, fertilizers, seeds, fuel, fruit trees, machinery etc. This is mainly due to that the effects of tangible inputs are immediately reflected in the farmers 'production, so they can feel in relatively short time the positive benefits, while the intangible inputs have no immediate effects, however, in the longer time if they are correctly implemented, they do bring to the farmers even greater or at least equal benefits in comparison with tangible incomes. The tangible inputs practically help to increase the production level and actually this is what majority of the farmers appreciate. However, the authors of this paper consider intangible inputs equally important since they support the enhancement of farmers' knowledge in agriculture and rural development fields, provide them with innovative information about new progressive technologies and guide them with strategies and conceptual guidelines. The reasonable balancing and logical combination of both intangible and tangible inputs is the prerequisite for successful management of progressive farmingactivities.

5. Discussion

Among the other objectives of the undertaken research, the main interest was focused into the success of four projects which were implemented in Republic of Armenia by four international institutions with aim to prove that if project is appropriately managed, its results will be reflected in the benefits of projects' recipients. It is worth to mention, that this topic in the field of agriculture and rural development is not so frequently reflected in the scientific literature.

For achieving the objectives of the article have been used hierarchical multiple regression to estimate the two models. The first model was constructed for dependent variable 'income change'. According to significance level, it was found out that the coefficients of change in agricultural production ($p=0.002$), qualification rise ($p=0.000$) and market access ($p=0.007$) after participation in projects make statistically significant contribution on income change. In addition, the beneficiaries having more than one supporters (involvement into the projects) are

positively affecting income change ($p=0.042$). Therefore, according to results obtained from the first model there was considered a positive and significant unidirectional contribution of our predictor variables in income change of beneficiaries after participation in projects. From this point of view, the achieved results meet the Turner's requirement (2005) on the project that through it delivery have to be achieved beneficial changes. This is also in line with statement of Cleland (2004), when he writes that projects besides of the other prerequisites has to assure the beneficial changes for the recipients.

The second model was constructed for dependent variable "easiness to market accesses". According to significance level, it can be stated that the coefficients of income change ($p=0.007$), three supporters ($p=0.037$) and tangible agricultural inputs ($p=0.039$) variables after participation in projects make statistically significant contribution on easiness to market access. This is in accordance with statement of Amrouk et Al. (2013) that the sustainability of the project beyond its life time is the key factor for success. In this respect, is mentioned the production growth, diversification of production and also market access.

Furthermore, according to the results stemming from Model 2, for farmers involved into the questionnaire survey, tangible inputs as a significant contribution to market access are more important than intangible. The analogical result regarding to intangible inputs have been found by Fortson *et. Al* 2012 in relation to the ACIDI/VOCA's project. They claimed that intangible inputs of the project do not have significant impact. However, it should be noted that FAO with FAO-EU Food Facility Program, provided diverse tangible and intangible inputs as the consequence of the high food prices and the global economic downturn from 2008 to 2010 in 50 developing states. As the consequence, there is sound evidence that investing into the agriculture and nutrition had had immediate positive effect on the countries with acute problems in this field, number of the hungry people immediately dropped and so far has declining trend (FAO, 2013). According of Sanghera (2006), the result in the projects is typically knowledge related outcome. Despite that knowledge is intangible input, it is viewed as immensely important factor for successful project follow-up.

At this point, there is unidirectional significant contribution from income change to easiness to market access. Therefore, as having unidirectional contributions from both sides it can be stated that there is bidirectional positive significant contribution between easiness to market access and income change.

6. Conclusion

The submitted article deals with evaluation of the selected projects in the Republic of Armenia which have been delivered by four international organizations. With objective to gather the data for further processing, had been developed the questionnaires tailored on the beneficiaries' circumstances.

According to significance level, as it is mentioned in the results' part, we can say that the coefficient of tangible inputs by the project supporters makes statistically positive significant contribution on agricultural production change, at least this is what farmers intensively perceive. However, stemming from the project results, it is also assumed that agricultural trainings and achieved level of education are equally important, as according to results, the higher qualification of farmers has a positive contribution on the income change.

According to the results, the all hypotheses were confirmed; therefore, we can conclude that after project implementation there are variables which are strictly affecting the beneficiary's income change

Drawing attention to the utilization of the achieved results from the survey, leads us to the important implications for formulation, implementation and management of the projects in agricultural and rural sector. So in Armenia, as well as in the other countries, there will be growing engagement with issues of project management due to the strengthened integration processes. This refers to agricultural and rural development sector, as well as to the other areas of the business life. Therefore, in the academies has to be developed intellectual knowledge and skills, in order to help to supporters and implementers to address the challenges and opportunities associated with project management. The results and recommendations stemming out from this article have no ambitions for the complex resolutions, but the authors' effort was to address the relations among the projects deliveries and their impacts on the direct beneficiaries. The achieved results confirm that participation of beneficiaries in the projects, in frame of agricultural and rural sector has the positive impact on their production and income change.

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Sustainable entrepreneurs in Poland - the pilotage study among polish entrepreneurs from Silesia region

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Abstract

Sustainable development concept, due to its versatility, imprints its sign in almost every area of human life. Thus, over the years, many terms and definitions, closely related to this concept, have arisen, such as: sustainable transport, sustainable supply chain, sustainable logistics or sustainable marketing. Also, the sustainable entrepreneur has been created on the basis of this concept, as well. However, unlike the terms, previously mentioned, this term is quite new and still it is not possible to clarify if whether the entrepreneur can be described as „sustainable” or not. Therefore, the main purpose of the research, conducted among the polish entrepreneurs, was an attempt to identify certain characteristics, attitudes and actions, which taken together give the picture of „sustainable entrepreneur” in Poland. The research was conducted among polish entrepreneurs, operating on the market in Silesia voivodeship.

Keywords: sustainability, entreoreneurs, sustainable entrepreneurs, pilotage study

JEL Classification: M20, M21

1. Introduction

Entrepreneurship, next to flexibility, setting goals and striving to achieve them, is one of the characteristics of human resources. The market conditions, in which the entrepreneurs have a freedom to act, fully serve to entrepreneurship's development. Entrepreneurship is also an important factor in achieving their success, which is usually measured by the height of the gained profit, it is also a force that integrates a variety of resources, which are necessary to start an economic activity (Schaltegger&Wagner, 2008). Thanks to the entrepreneurship, new enterprises have been created and thus affect the creation of new job positions, so the tangible and intangible values are multiplied (Kadłubek&Lis, 2013). Above all, entrepreneurship contributes to the competitiveness of the organization not only in the closest environment but also on a global scale.

Entrepreneurship is an equivocal term and attempts to define it, have been taken by many authors dealing with this issue. However, J.A. Schumpeter is considered as the creator of the theory of entrepreneurship, who defined it as a process of creative destruction, leading to new combinations in the sphere of production creation, being the germ of entrepreneurial activities (Kot&Brzeziński, 2015). And entrepreneur is responsible for creating new economic ways, which have brought solutions better than the previous. The entrepreneur is usually defined as one who organizes, manages and assumes the risk of a business or enterprise (Graham, 2010).

According to this, the essence of entrepreneurship lies in breaking with routine and dismantling existing structures. Another definition of entrepreneurship describes it as willingness and ability to make and solve emerging problems in a creative way, and the ability to adapt to changes in the environment (Strużynki, 2003). The stimulator of dynamic development of entrepreneurship and the creation of small businesses willing to take the risk of economic self-employed is the situation on the labor market.

1.1 Ecopreneurship

The term "ecopreneurship" first appeared in the 90s of the last century, as a result of the publication of the Brundtland Report in 1987, in which underlined the impact of the economic growth on biodiversity of the Earth. In contrast to *entrepreneurship which currently is one of the most important factors that allow for a society to be conscious of its rights and opportunities* (Czarnewski, 2016), ecopreneurship derives from the „environmental entrepreneurship” expression, which has began to emerge in the early 90’s. According to D. Holt, there was an increase in business opportunities in the early 1990’s by emerging new choices of lifestyle, new environmental legislation and growing awareness of gaining competitive advantages of business from the „green” point of view (2010). This greater concern on environmental issues, encouraged companies to operate according with more sustainable business models, including environmental and social aspects (Cohen&Smith&Mitchell, 2008). *“Eco-entrepreneurship, as it generates benefits to sustainable development, might be best created by smaller, faster moving firms usually characterized by start-up businesses”* (Randjelovic&O’Rourke&Orsato, 2003). Ecopreneurship is defined as „*a person who seeks to transform a sector of the economy towards sustainability by starting up a business in that sector with a green design, with green processes and with a life-long commitment to sustainability*” (Issak, 2002). This definition given by R. Isaak highlights entrepreneurship which start up their business with „green” idea and also strive to change the whole economy sector to more sustainable and environmentally responsible.

1.2 Social entrepreneurship

While the ecopreneurship is mostly concentrated on environmental issues, social entrepreneurship is focused more on social aspects. This term is the result of growing awareness that the world cannot be changed and quality of life as well, without conducting socially responsible actions. This social aspect was underlined in the definition of ecopreneurship given by Dixon and Clifford. The social entrepreneurship has also arisen in the beginning of 1990’s, it was caused by five main reasons (Zahra&Rawhouser&Bhaw&Neubaum&Hayton, 2008):

1. Global wealth disparity,
2. Movement of corporate social responsibility,
3. Market, institutional and state failures,
4. Technological advances and shared responsibility,
5. Growing number of non-profit organization dealing with social issues.

As J. Bell and J. Stellingwerf stated „*social entrepreneurs measure success by creating social capital, social change and addressing social needs*” (2012). While traditional entrepreneurs measure their performance on profits and act mainly for the economy, social entrepreneurs act mainly for social change, their motivation is to change the worlds, and by providing innovative solutions they try to improve life quality, health and social surroundings. As was the same with ecopreneurship, in the literature there are many definitions trying to describe this concept. C. Leadbetter, in his definition underlines that social entrepreneur’s main goal is not profit making for itself, but achieved profits should be then directed to a specific social groups, with special needs or disadvantaged (1997). According to G. Dees definition social entrepreneur „*plays the role of change agents in the social sector, by adopting a mission to create and sustain social value (not just private value), recognizing and relentlessly pursuing new opportunities to serve that mission, engaging in a process of continuous innovation, adaptation, and learning, acting boldly without being limited by resources currently in hand, and exhibiting heightened accountability to the constituencies served and for the outcomes created*” (2016). And in definition given by D. Bornstein, as innovative aspect of social entrepreneurship is underlined,

according to his words, social entrepreneurs are „*the driven, creative individuals who question the status quo, exploit new opportunities, refuse to give up and remake the world for the better*” (2004). In addition, social entrepreneurs use the resource in an innovative way in order to pursue opportunities to catalyze social change and/or address social needs.

1.3 Sustainable entrepreneurship

It was a matter of time, that as a result of combining these two above terms” ecopreneurship and social entrepreneurship a new term would be created – sustainable entrepreneurship. The sustainable entrepreneurship concept has gained importance over recent years. The concept of sustainable entrepreneurship was derived from sustainable development concept, which can be defined as the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce, their families, local communities, the society and the world at large as well as future generations (Gagnon, 2012). It links sustainable development with business activities. And this relationship has been dealt with through various ways of thinking, and resulted in the appearing of new types of entrepreneurs, called as ecopreneur or social entrepreneur (Wu&Huang, 2015). What is the difference between them, is that ecopreneur pursues environmental opportunities from an economic point of view, while the social entrepreneur – is characterized by a broader social perspective (Kot&Brzeziński, 2015). Recently a new term “sustainopreneurship” has been shown, it is a portmanteau of sustainability and entrepreneurship (Abrahamsson, 2006). And it described the business organization in a way to solve problems related to social and environmental sustainability. It is simply “business with a cause” – where main problems of current worlds are turned into business opportunities by deployment of sustainable innovations (Brzozowska&Dacko&Kalinichenko, 2015). Sustainable entrepreneurship is called by some researchers as a “sustainability-driven entrepreneur-ship” or “sustainable-minded entrepreneurship”. But in some studies an “environmental entrepreneurship” can be found (Ptak&Sroka, 2014). So many various terms cause that, at present, there is no universally accepted definition on sustainable entrepreneurship and in the literature many definitions proposed by many researchers can be found.

At present sustainable entrepreneurship has been perceived as an overarching way of looking at the entrepreneurs’ contribution to ecological, economic and social aspects. Thus, sustainable entrepreneurship today, is perceived as a way of generating competitive advantage by identifying sustainability as a new business opportunities. Which may result in new, more sustainable productions methods, business organization and products (Kott&Sukiennik&Grondys&Wójcik-Mazur, 2016). What is characteristics for sustainable entrepreneurship is that this concept is not about meeting environmental regulations only, but it rather takes advantage of the increasing need to more sustainable production resulting in more sustainable products and services.

2. The research purpose and methodology

The main purpose of the research, conducted among the polish entrepreneurs, was an attempt to identify certain characteristics, attitudes and actions, which taken together give the picture of „sustainable entrepreneur” in Poland. The research was conducted among polish entrepreneurs, operating on the market in Silesia voivodeship. In total 114 filled questionnaires were collected and this is a representative sample for all companies operating in Czestochowa region. And the obtained results present a very interesting outcomes and underline the need for the further research in this subject. To conduct the research in order to identify polish sustainable entrepreneurs and also taking the polish reality of conducting the business, the following questions have been put:

1. Does your company possess certificates of being environmentally friendly?
2. What kind of ecological aspects are being taken account during company's everyday activity?
3. What kind of social aspects are being taken account during company's everyday activity?
4. What is the company's involvement in local culture's development?
5. What is the company's involvement in further city's development?
6. Does the company transfer its 1% tax to the external organizations/foundation/people in need?

In the further part of the questionnaire were the questions to obtain the general information about the surveyed company, such as: size of the company, activity profile, length activity and if the company is profitable or not.

3. The Research results and Discussion

3.1 General data about SME's in Poland

At present, in Poland there are 1.84 million SMEs, with an average of 48 people per 1,000 inhabitants. The number of enterprises in total is steadily increasing. In 1997, there were 1.58 million SME's on the market and in 2013 there were 1.77 million. Between 2013 and 2014 the number of SME's increased by 4% - this is one of the major increases in the number of active companies in recent years. The share of GDP by SMEs is 73.5%, which is almost $\frac{3}{4}$ of the total value generated by all polish companies.

At the end of 2014, the number of employees in enterprises in Poland was over 9.1 million, of which 6.3 million (69.2%) worked in the SME sector. There is still a clear dominance of people working in micro and small businesses. Over five years, more than half (more than 4.7 million people) have been working in the whole enterprise sector (Raport o stanie sektora, 2016). Since 2010, the size of the average company in Poland has not changed. Statistical data show that in the average Polish company there are an average of 5.5 employees, while in a large company - 840 employees, in a medium - 104 employee, in a small - 21 employees and 2 in a micro enterprise.

In 2014 gross monthly salaries per one employee working in enterprises increased by 3.7% to reach 919,57 Euro. Gross wages are clearly differentiated depending on the size of the enterprise. In the small companies the average gross wage in 2014 was 677,59 Euro (including 546 Euro in micro enterprises) (GUS, 2014). Polish companies still benefit from competitive advantage over other EU countries, which are low labor costs (Eurostat, 2014).

The value of enterprise investment expenditure in 2014 increased by 13% to 43,23bn Euro in comparison to the previous year. This represents 73% of total investment outlays (59,15bn Euro) (GUS, 2016). Reflecting the good macroeconomic situation in 2015 was the improving condition of enterprises. The total revenue of companies employing more than 9 persons exceeded 3 trillion PLN and their dynamics was higher than in 2014 (Przedsiębiorczość w Polsce, 2016).

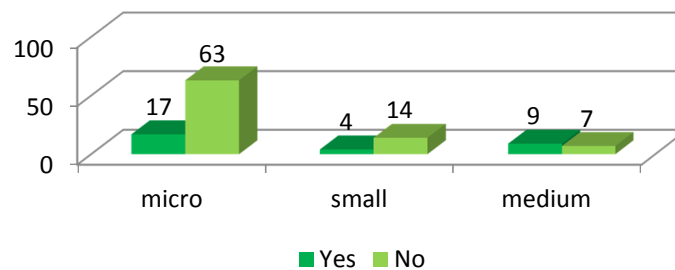
3.2. The research results

Despite the fact that questions about the company itself were the last part of the questionnaire, in order to outline the basic image of the surveyed companies, these results are presented at first.

As was mentioned earlier, 114 SMEs were involved in the research, with micro enterprises were accounting for the largest share - 70%, 16% of small enterprises and 14% of medium, which

was the smallest group. Also, microenterprises operating in the service sector accounted for the largest share of all companies, neither none of the surveyed micro-enterprises did not operate in the manufacturing sector. Among the small enterprises, the largest number operate in the trade sector, and among the medium-sized enterprises, their largest number operate in service sector. 14 companies of the 114 all surveyed, operate for less than one year, so they are very young. The largest percentage of respondents has been active for more than 1 year but less than 5 years, while 61 micro enterprises operate in the market from one year to 10 years. Among the small companies, the largest number of them operate in the period from 1 to 5 years, similarly to the case with medium ones, the larger part of them operate on the market for not more than 5 years. The surveyed companies were also asked whether their business was profitable. As a result of the responses, it is clear that the vast majority of the surveyed companies is profitable, among the micro-enterprises - more than half of them is being profitable. In the other two groups of enterprises, only three companies indicated that their business bring losses.

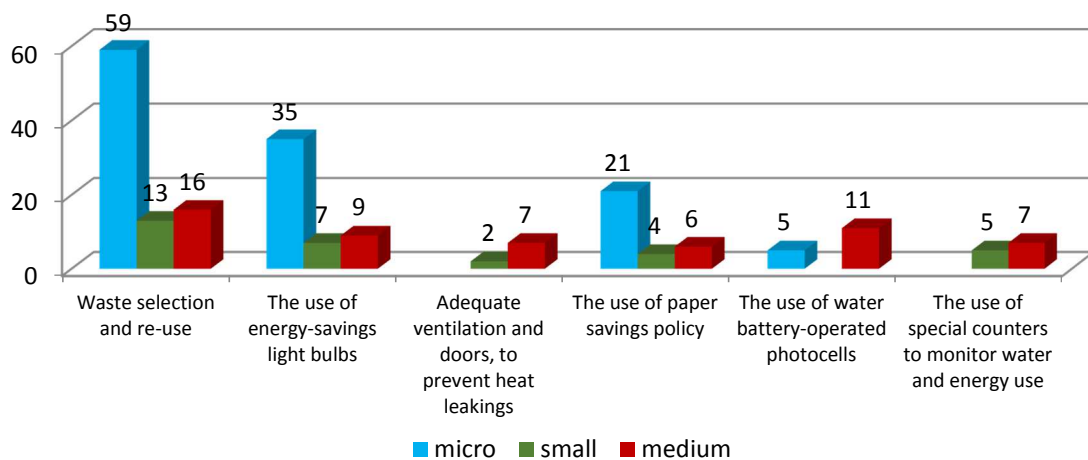
Figure 1: The possession of certificates of being environmentally friendly by the companies



Source: own work

When questioned about the companies' certifications of attesting their environmental responsibility, the overwhelming majority of the respondents responded negatively. At the same time, the highest percentage was noted for micro enterprises. The same is for small companies, only 4 of 18 admit to possess such certificates. In contrast, other proportions are visible for medium enterprises - 9 out of 16 have such certificates. Thus, it can be considered that in this case, medium enterprises are characterized by a higher level of ecological awareness.

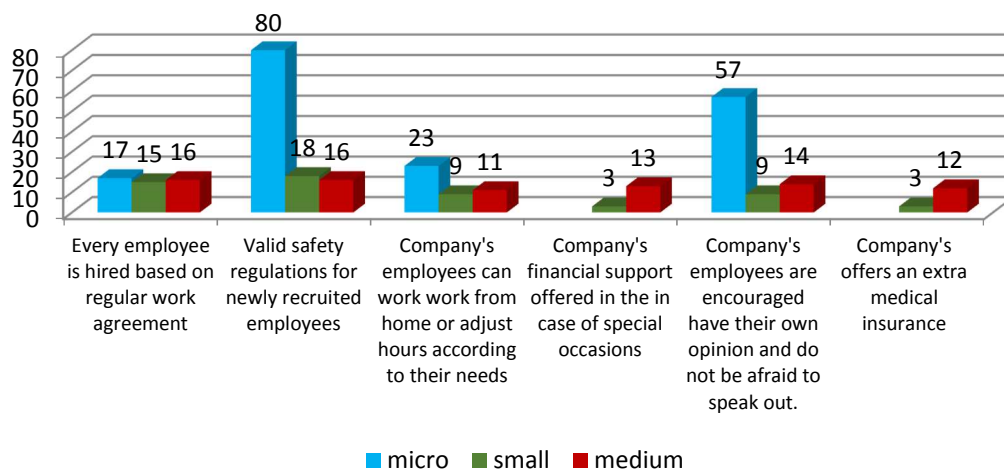
Figure 2: The kinds of ecological aspects being taken account during company's everyday activity



Source: own work

As the above figure illustrates, the most commonly used solution is waste selection and reuse, as well as the installation of energy-efficient light bulbs in the office. Waste selection is the result of the introduction of a new Waste Act in Poland, which requires each company to pay a fee for waste collection, but in case the waste is segregated, the fee for collection is lower than for non-selected waste. Among all micro-enterprises, almost $\frac{3}{4}$ of them segregates waste, among other groups, 81% of small and 100% medium-sized companies segregate waste. Another very popular solution is the use of energy-efficient light bulbs, which is most often installed when the office is being built. In the case of other solutions, the use of paper policy is also quite popular solution used by the surveyed companies. Also 5 micro-companies have installed water battery-operated photocells, in order to use water in a saving mode. It can be observed, however, that in the case of micro enterprises, none of the respondents has adequate ventilation, windows and doors to prevent heat loss and none of them use appropriate meters to measure water and energy consumption.

Figure 3: The kinds of social aspects being taken account during company's everyday activity

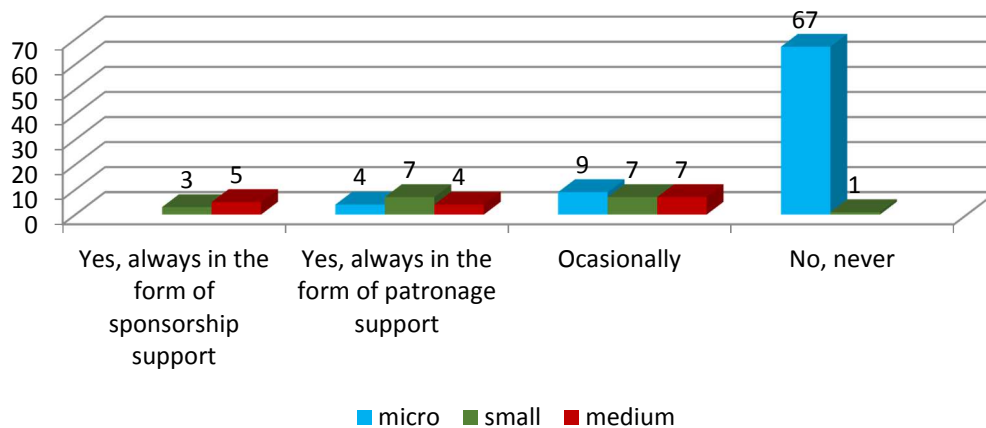


Source: own work

As is visible from the figure above, all surveyed companies possess valid safety regulations for newly recruited employees. However, this 100% compliance is caused by appropriate government guidelines, which lack of it, may result in high penalty fines. However, there is completely different situation in case of employee's contract of employment signed by the company for every employee. While in the case of small and medium-sized enterprises, the percentage is almost 100%, in the case of micro enterprises, only 21% of them declared, that every employee is employed on the basis of a contract of employment. Of course, it is worth bearing in mind that such sincere statements were only possible under anonymous conditions. Other companies have admitted that instead of regular employment contracts, they hire employees based on work contracts that are more popular than contract commission, that have recently been filled with contributions and medical insurance.

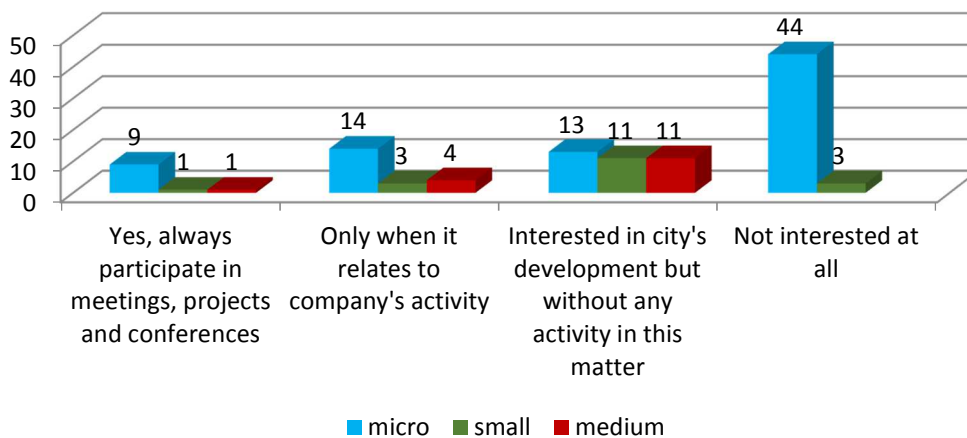
A large percentage of micro enterprises have indicated, however, that the employee's opinion is important to them and encourages them to speak. But in the case of actions such as offering financial support or supplementary medical insurance, none of the micro companies surveyed applied such solutions. On the other hand, among the medium-sized enterprises, the vast majority of them made it possible for employees to work from home, to provide financial support to their employees or to obtain additional medical insurance.

Figure 4: The company's involvement in local culture's development



Source: own work

It is clear from the figure above, that the overwhelming majority of micro enterprises have never been involved in activities that support the cultural development of their closest surroundings. Only 4 of the surveyed micro-enterprises always take an active part in such actions and 9 occasionally only. Among small and medium-sized enterprises, respectively 16% of small and 31% of middle are always involved in financial support and 41% of small and 25% medium in the form of patronage over the event.

Figure 5: The company's involvement in further city's development

Source: own work

There is a similar situation in the case of the company's involvement in the development of the city, more than half of the micro enterprises declared that they do not take any active part and are not even interested in any participation, as opposed to medium-sized enterprises, none of whom declared that they were not interested in city's further development at all. 17% of micro enterprises take part in actions supporting the development of the city but only if it is directly related to their activity, while 16% of them admit that they are interested but do not take any action in this direction. Among small and medium-sized enterprises, 5% of small and 6% of middle declare that they always take an active part in meetings, projects or conferences devoted to the further development of the city. 16% of small and 25% of medium are involved but only if they are directly related to their business.

The surveyed companies were also asked if they transfer 1% of the tax for various purposes. The results clearly show that more than 85% of all surveyed companies donate 1% of the tax to their specific targets. Among small and medium enterprises this figure was 100%, while among micro enterprises more than 85%. This is caused by the fact, that at first 1% tax donation is a quick, cost-free and very popular solution in Poland, and the percentage of people and businesses who donate 1% for charity tax increases year by year.

4. Conclusion

On the basis of the research conducted among Polish entrepreneurs operating in the Silesia voivodeship, one main conclusion can be drawn - Polish entrepreneurs, on the one hand, are trying to act responsibly, are engage in pro-environmental and pro-social activities, but on the other hand they do not fully the "sustainable entrepreneur" definition. But it is worth noting that while medium enterprises are characterized by greater environmental and social awareness, in micro enterprises these issues are still pushed to the aside. The above main conclusion can be supported by several more specific outcomes:

- in the case of possession of environmental certificates, most of them had medium-sized companies, while the majority of micro ones do not own any of them. This may be due to the fact that obtaining such a certificate often involves measurable financial costs, and thus could be too expensive for the micro and small enterprises,
- the most popular environmental activities include waste selection and the use of energy efficient light bulbs. Can be assumed that this is now a standard among Polish entrepreneurs. It should not be forgotten, however, that such activities result in

significant financial savings in the form of lower charges for waste removal and in the form of lower electricity bills,

- in the case of pro-social activities, all companies have up-to-date instructions and regulations on occupational health and safety, while the issue with employment contracts looks much worse. In this case, while in small and medium-sized enterprises, almost all employees are employed on the basis of regular employment contracts, guaranteeing their benefits and health insurance, among micro-enterprises – most of them offer to their employees "Junk contracts" which do not guarantee the above benefits,
- among the surveyed enterprises, their low involvement in the cultural development of the city in which they operate is also evident. This demonstrates the lack of interest in the closest social environment and the lack of desire to know it. It is a bit better to engage in the development of the city - but the overwhelming majority, mostly micro enterprises, are not interested in what is happening in the city in which it operates,
- however, it is worth noting that almost all companies donate their 1% tax for charity. Both the number of companies donating 1% of the tax as well as the amounts themselves are growing year by year.

To sum up, medium-sized entrepreneurs have the greatest environmental and social awareness, and they are also closest to the concept of "sustainable entrepreneur", while the micro entrepreneurs have the slightest awareness of the need for pro-social and pro-social activities. The easiest way to explain this fact is that such activities generate costs for the company, and in the case of micro enterprises they often struggle to survive on the market, thus they cannot afford any additional expenses. But on the other hand, there are a number of non-costly activities - even taking a patronage over a cultural event - and that can bring measurable benefits to the company. It therefore seems worth exploring the issue of the reasons for such a low interest in environmental and social issues among microenterprises.

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Social responsibility of small and medium-sized enterprises with regard to the social environment and the practices of its implementation

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Abstract

The herein paper is a theoretical discussion on the issue of corporate social responsibility and an empirical presentation of socially responsible activities with regard to the social environment. The principal aim is the search for the answer to the following research question: in what scope do small and medium-sized enterprises undertake socially responsible activities with regard to the social environment? In the theoretical section, the author presents an outline of the concept of corporate social responsibility and the benefits associated with conducting activities that are pro-social with regard to local communities. In the research section of the paper, the author places the research results of the socially responsible activities of small and medium-sized enterprises under analysis with regard to the social environment they operate in.

Keywords: *ethics of business, corporate social responsibility, small and medium-sized enterprises, social environment*

JEL Classification: D22, D64, M14

1. Introduction

Enterprises are increasingly understanding the need and perceiving the benefits accruing from conducting business in the spirit of corporate social responsibility. The fact that social responsibility of a profit-making company is a competitive advantage has already been proven by research (Formánková et al. 2016). With this context in mind, social activities with regard to the external social environment are of great significance. The condition of ensuring the high level of relations with the social environment is the cognition, perception and anticipation of social expectations. The elaboration of the mechanisms of cooperation with the social environment in terms of resolving social problems facilitates the conducting of effective activities that bring multi-lateral benefits. This is of particular importance to small and medium-sized enterprises that by running activities in the local community strive to build the image of a reliable partner and attractive employer. In this context, CSR may lead to the strengthening of their position on the local market over a long-term period and consequently increase the profits from the activities run.

The principal aim of this paper is the search for the answer to the following research question: in what scope do small and medium-sized enterprises undertake socially responsible activities with regard to the social environment?

2. Social involvement as a social element in corporate social responsibility

In subject-related literature, a multitude of definitions of activities that are acknowledged to be socially responsible exist. Some of them emphasize the ethical aspect of CSR by stressing that the organization is morally responsible and obliged to be accountable before the law and the community in terms of their business activities (Walkowiak, Krukowski, 2009, p.10). Likewise, J. Adamczyk (2009, p. 10) perceives CSR in terms of ethical categories by indicating that it

signifies the obligation towards a transparent and ethical way of running business activities in accordance with the principles of sustainable growth and the pursuit of social prosperity while taking account of the expectations of the stakeholders in accordance with the law and norms of behaviour. Another approach places CSR in the context of ethical, social and ecological effects evoked by the management of the company. This group includes the notion of the Ethos Institute (2007, p. 78), according to which, corporate social responsibility is a form of management that is defined by the ethical relationship and transparency of the company with all the stakeholders with whom it has a relationship as well as with the establishment of corporate goals that are compatible with the sustainable development of society, preserving environmental and cultural resources for future generations, respecting diversity and promoting the reduction of social problems. In subject-related literature, it is also possible to encounter the definitions of CSR that place emphasis on the effects of corporate activities for the stakeholders of the organization. Corporate social responsibility relates primarily to achieving outcomes from organizational decisions concerning specific issues or problems which (by some normative standard) have beneficial rather than adverse effects upon pertinent corporate stakeholders (Carroll, Buchholtz 2009, p. 40). By way of conclusion, the majority of definitions of CSR describe it as concepts encompassing economic, legislative, ethical and philanthropic issues of expectations that society has with regard to an organization.

In the definitions of CSR, the stakeholders of an organization are of significant importance, whose interests should be taken into consideration during the course of taking managerial decisions. G. Slinger and S. Deakin (1997) define the stakeholders of an organization as those whose survival and prosperity depend on the cooperation with the enterprise at hand and its creativity. In turn, Geunchan et al. (2005) claim that the stakeholders of an enterprise are groups and individuals who are under the influence of its activities or have an impact on it. Another division was proposed by Rodriguez and Ricart (2002) who distinguished three groups of stakeholders as follows: consubstantial stakeholder (employees and owners), contractual stakeholders (clients, suppliers, competitors, financial institutions) and contextual stakeholders (local, regional state administration, media). One of the principal stakeholders of an enterprise is that of the local community and its organizations, namely, social organizations and local authorities. Its importance stems from the fact that an enterprise avails of the infrastructure of the region, while also launching new technologies that are accepted by the community, as well as employing workers and hence exerts an impact on the community in a conscious or sub-conscious manner.

The activities of socially responsible enterprises with regard to stakeholders may appear on four levels as follows: economic, legislative, ethical and philanthropic. Greater attention should be paid to the philanthropic level that operates on the basis of the principle of “giving back” which constitutes the unwritten agreement between an enterprise and the community in terms of the expectations of the activities of the firm on behalf of the local community (Carroll, Buchholtz 2009, p. 43). This encompasses the voluntary, discretionary or charitable obligation of the firm with regard to the community that may adopt the form of donations, company products and services, corporate volunteering, partnership with self-government and other types of voluntary involvement of a firm in social issues. Philanthropy is usually executed in partnership with charity organizations operating in the local community. Although it does not bring direct benefits to the firm, as indicated by research it had an impact on its image by creating the positive feelings and attitudes of consumer with regard to the firm (Lii, Lee 2012, p.12).

The philanthropic dimension has become the basis of the concept of CSI (CSI- Corporate Social Involvement or CCI – Corporate Community Involvement), which concentrates on the adjustment of business aims to the needs of the community in which the enterprise operates

(Adkins S., 1999, p. 37). This notion relates to the corporate social involvement in the projects whose aim is to develop society (Kiran 2011). CCI is usually interpreted as the operations of an enterprise on behalf of the local community which brings benefits both to the local community and to the enterprise itself. Firms engage in social projects that are aimed at the prosperity and development of the local community. These projects may lead to the growth of prosperity and quality of life, relate to the physical development of society, such as education, improvement of health care, development of renewable energy, sanitary and hygienic conditions. They may also refer to the broadening of knowledge on the issue of social problems: violence in a family, women's rights, child labour, etc.

The strategies of CCI applied by corporations in the area of social involvement are divided into three categories as follows: 1) donations, 2) corporate volunteering, (3) partnership with non-profit organizations. In the strategy of donations, an enterprise allocates constant funds or a percentage of revenue to the realization of specific aims. Sponsoring is a form of donations. The second strategy is based on the employees devoting their time to social activity on behalf of the local community after work or during working hours. The third strategy is based on cooperation with non-profit organizations in terms of resolving social issues (Arli, Cadeaux 2014, p.10).

Social involvement is most frequently an element in the strategies of operations of large firms. It relatively more seldom occurs in small and medium-sized firms. It is worth changing the attitudes of the owners of these enterprises in favour of social activities on behalf of the local communities as a multitude of small enterprises cooperate with local communities and understand their problems better. This would bring them multiple benefits. P. Hohnen (2007, pp.31-32) presented a range of activities which SMEs could undertake within the framework of social involvement: encouraging employee volunteering in the community and with financial contributions and help in kind; making some of the business's products or services available free or at a cost to charities and community groups; looking for opportunities to make surplus products and redundant equipment available to local schools, charities and community groups; buying from local suppliers and striving to hire locally; offering quality work experience for students (job shadowing); collaborating with local teachers to make the business the subject of a school project. Use the business's experience to help a local school, charity or community group become more efficient and entrepreneurial; use some of the marketing budget to associate the business or brand with a social cause.

Within the framework of the social involvement of enterprises, activities of a commercial nature are also undertaken that are of specific business aims associated with the improvement of image, increase of sales, while simultaneously directed at resolving issues of significant social importance. These activities are associated with socially involved marketing (CRM – Cause Related Marketing). This is based on the idea of utilizing money in marketing techniques and strategies with the aim of supporting socially significant issues and simultaneously strengthening the business interests of the company itself. Sometimes enterprises and charity organizations create a partnership with the aim of trading products or services for mutual benefits (Adkins 1999).

From the perspective of an enterprise involved in the local community, it is beneficial as it leads to the improvement of its image in society. In research conducted by Council of Foundations, it was indicated that an increase of social involvement by a firm by 1 unit improved the reputation of a firm by 0.27 of a unit in the case of manufacturing firms, while 0.55 of a unit in the case of trading firms. Nevertheless, improvement of reputation by 1 unit caused the increase of loyalty of clients by 0.42 and 0.32 of a unit respectively (Kwiecińska 2014, p.469). Likewise,

it strengthens the morale of employees who perceive the enterprise as a pro-social organization. It also builds the sense of loyalty with regard to the firm and employees are willing to recommend their employer to others and become more devoted to their work (The Corporate Citizenship Company 2003).

3. Social involvement of small and medium-sized enterprises on behalf of the local community in light of research

3.1 Methods and characteristics of the analysed population of small and medium-sized enterprises

Research on the opinions of entrepreneurs and managers on the issue of the range of applying the principles of social responsibility in economic activities was conducted in 2015 and encompassed 40 micro-sized enterprises (0–9 people), 31 small enterprises (10–49 employees) and 37 medium-sized enterprises (50–249 employees) conducting business activities in the province of Silesia. Over 46% of those surveyed conducted business in miscellaneous sectors, which is characteristic of all small and medium-sized enterprises on a national scale. A significantly lower proportion involved enterprises dealing with wholesale and retail trade (32%) and manufacturing activity (22%). The survey method was utilized in this research availing of the survey technique. The research tools were built from questions enabling the identification of the elements of CSR, including social involvement with regard to the social environment. The aim of research was the identification of activities that are socially responsible with regard to the local community and their evaluation in the context of social responsibility.

3.2. Forms of social involvement of SMEs

A significant element of the strategy of social responsibility is that of the relations between an enterprise and the local community in which it operates. Small and medium-sized enterprises are usually strongly associated with the social environment. Entrepreneurs and employees that are part of it sometimes initiate undertakings that are in favour of resolving specific social and public problems. Social involvement in these activities is one of the elements of social responsibility that favours the building of long-term and positive relations with the social environment. In the opinion of Konosuke Matsushita, the basic mission of an enterprise should be participation in social development and undertaking business activities in harmony with society and people (Zarządzanie z pasją, in other words, a discussion with Konosuke Matsushita, 2004, p. 45).

The question arises as to whether and to what extent small and medium-sized enterprises engage in activities on behalf of the local communities. In the desire to evaluate the level of involvement of enterprises in matters of the local communities, it is worth specifying the number of enterprises undertaking or engaging in ventures of the sphere of social responsibility. Self-analysis on the implementation of the assumptions of CSR in the sphere of social involvement in the business practice of small and medium-sized enterprises reveals that almost half of the analysed enterprises undertake such activity (Fig.1.) Similar results were acquired in research on Polish and Swedish SMEs in the sphere of the application of CRS in business practice (Nikodemaska - Wołowik 2011, p.54).

Figure 1: Involvement of enterprises in activities on behalf of the local communities in percentage form

Source: self-analysis

The involvement of an enterprise in the issues of society may take on various forms of activity. Nationwide research on the sphere of initiatives on behalf of the local communities reveals that simple forms of involvement are most frequently undertaken: financial support of social organizations, charity organizations, sponsoring sporting events and/or cultural promotion of culture, promotion of local traditions and educational activity (Skrzek-Lubasińska et al, p.183). In spite of the fact that they are worthwhile, they do not lead to the long-term social development and bring benefits associated with the positive image of the firm over a short-term period.

Self-analysis indicates that social involvement in SMEs first and foremost takes on the form of sponsoring sporting and/or cultural events, financial support of social and cultural organizations, aid in kind, e.g. via offering office equipment or company goods, lending equipment, premises, means of transport, educational activity (e.g. organization of theme-based workshops). However, the factor differentiating the scope of social involvement is that of the size of an enterprise. Medium-sized enterprises support the local communities more frequently than micro-sized and small enterprises relatively speaking, which first and foremost relates to educational activities and the promotion of culture, including local traditions. In turn, micro-sized firms conduct informational-promotional activities more often than other types of enterprises, e.g. pro-ecological or pro-health.

Table 1: Forms of social involvement of SMEs in percentage form

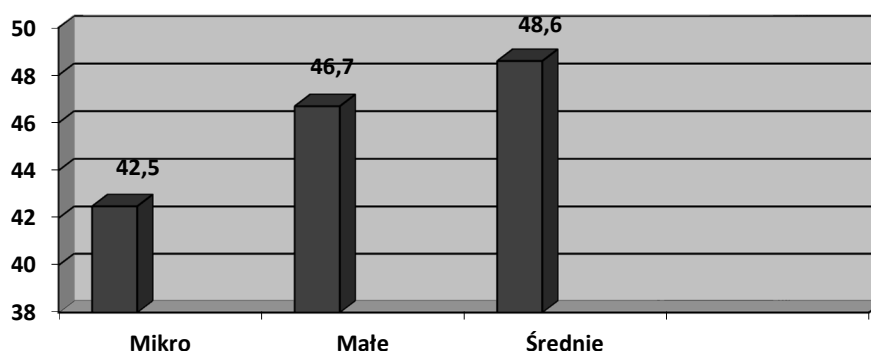
Type of activity	Micro N=40	Small N=30	Medium N=37	Total N=107
Educational activity (e.g. organization of theme-based workshops)	15.0	5	24.3	14.0
Corporate volunteering, or voluntary and unpaid work on behalf of the needy organized by the employer	2.5	10	13.5	8.4
Promotion of culture including local traditions	2.5	11	21.6	11.2
Information-promotional activity, e.g. pro-ecological or pro-health	17.5	5	8.1	9.3
Sponsoring of sporting events and/or cultural events	22.5	30	35.1	28.9

Financial support of social and charity organizations	20	32	24.3	24.3
Aid in kind e.g. via offering office equipment or company goods, lending equipment, premises, means of transport	27.5	26.7	13.5	22.4
Membership of local associations	17.5	8	8.1	9.3

Source: self-analysis

A better perception of the social environment of enterprises, including more effective activities requires a profound social dialogue. This encompasses both the issues of the development of the enterprise, including new investment, as well as cooperation in the creation of new social infrastructure. An enterprise should be open to the opportunity and need for dialogue with the local communities, which would facilitate the minimization of possible conflicts between the enterprise and the social environment. The research of the author at hand indicates that a mere 45.8% of the analysed firms declared that during the course of taking decisions that may have an impact on the environment of the enterprise, dialogue is conducted with the local community. Detailed analysis of the issue of consultation with the local community in terms of investment decisions indicates that medium-sized enterprises conduct dialogue more frequently than micro-sized and small enterprises (Fig. 2).

Figure 2: Consultation of SMEs with the local community on investment decisions that may have a potential impact (i.e. the construction of a new warehouse, expansion of the scale of production, transportation of goods)



Source: self-analysis

Apart from the standard action supporting the development of local communities, it is possible to encounter other forms of support for development. This particularly relates to the creation of economic potential by means of cooperation with other enterprises located in the local community. A form of support for local economic growth is among other things, the choice of suppliers of products/services that are essential for the running of business operations. The research conducted by the author at hand reveals that an enterprise from the SME sector most frequently chooses local, regional and national suppliers, while relatively more seldom foreign suppliers, whereas the micro-sized firms first and foremost prefer local suppliers, as is the case with medium-sized firms, while small firms choose regional suppliers.

Table 2: Selection of suppliers of products/services according to the size of enterprises in percentage form

Type of suppliers	Micro N=40	Small N=30	Medium N=37	Total 107
Local suppliers	60	36.7	45.9	48.6
Regional suppliers	17.5	40	13.5	21.5
National suppliers	20	33.5	35.1	29.9
European suppliers	10	3.6	29.7	14.9
Non-European suppliers, global suppliers	7.5	6.7	21.6	12.1

Source: self-analysis

By way of conclusion, the involvement of SMEs on behalf of the local community is relatively low in Poland. Research on the practices of CSR in SMEs indicates that in certain areas such as human rights, the natural environment or social involvement, action is relatively seldom undertaken (Nikodemska-Wołowik 2011). Likewise, the research of the author confirms the relatively low level of interest in these forms of support. The perspectives of the increase in the initiative in this area are not so interesting. In response to the question of whether greater social involvement is planned for the next 12 months, relatively few firms gave a positive answer. A mere 28% of firms are planning to get involved in activities on behalf of local communities. Simultaneously, such a will to take action is expressed by medium-sized enterprises.

4. Conclusions

The theories of CSR assume a multitude of benefits for small and medium-sized enterprises that apply them. One of the main advantages is that of the beneficial impact on the increase in the level of competitiveness of the enterprise, while the social values may have a varied impact on the profitability of small and medium-sized enterprises (Illés et al, 2015). Other benefits are as follows: improvement of the image, better position on the labour market, greater satisfaction and loyalty of clients, better network ties, while also strengthening of the staff potential (Bieńkiewicz 2008). If the leadership of the organization will understand the Corporate Social Responsibility strategy and they will not just use it as a marketing tool. By making the employees interested, they would like to be more successful in their work. With that the company gets more interesting ideas from its employees and it will increase the overall performance and competitiveness of the company at al. (Ubrežiová et al, 2016). Despite these benefits, the scale of interest in this concept among small and medium-sized enterprises is rather low.

On the basis of the research results, it is possible to state that SMEs frequently operate on an excessively small scale to be interested in all the areas of CSR to the same degree. They often focus on the activities that are directly associated with their functioning, namely, on clients, suppliers, business partners and employees. They do not pay great attention to the need to build broader ties with the local community. The local community, particularly in the case of the sector of SMEs should be a natural group through which support is directed. It is thanks to the local community that an enterprise may achieve success as their employees are derived from there and their clients are to be found there. Hence, entrepreneurs should support the local community to a greater degree than up to now. By participating in the resolving of social problems they strengthen their position on the local market. A common development of ideas is an action that brings effects both in the short-term and in the long-term future perspective.

Such practices build trust, strengthen the image of the enterprise as an organization that cares not only about itself and its business interests, but also satisfies local needs.

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The content and the form in public relations

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Abstract

The main focus of the report is on one of the tools of the marketing communication mix – the public relations (PR). PR as well as marketing use well-known trends which offer new forms of information presentation possibilities. The article deals with the fact that the form is a kind of existence and a display of the content, its inherent organisation. The content is however a determining aspect of the object, while the form is a feature which is modified in dependence on changes in the content and specific conditions of its existence. Moreover the form, which stands relatively separate, influences the content backwards. These are the two sides of reality affecting each other. Agenda setting is important for PR actuating in any area, along with cooperating with different types of communities. The report deals with one of the most important target groups, the media.

Keywords: public relations, media, agenda setting, form, content

JEL Classification: M 31, M 37

1. Introduction

There are many definitions of public relations (PR) in professional literature. They all agree on the fact that PR is one of the tools of the marketing communication mix and define it as an intentional, planned and long-term effort to create a reputation (goodwill) of an organization and to support mutual understanding and harmony between organizations and the public. PR take major part in case of so-called crisis communication, which is applied in the moment, when the trouble of companies become publicly (commonly) known (strikes, accidents, natural disasters, corruption, financial insolvency, technology failure, human factor failure etc.)

2. A brief history of PR

The activities, commonly referred to as PR today, were established along with the creation of human society and were formed as the society developed, at the beginning mostly for the purpose of persuading and modelling the public opinion on behalf of the sovereign. The first evidence of such activities can be found in Ancient Egypt. There are imprints in rocks and sand with a title Follow me! on them (Bajčan, 2003). In Ancient Rome there was a big contest for power between Octavianus and Marcus Antonius. There appeared a fight over popularity and the public favour along with the physical conflict. While Octavianus identified himself with the god Apollo, the symbol of order and harmony, Antonius worshipped Bacchus (Dionysus), considered to be a god of unbridled diversion, even terror or disturbance. The actual fact that they both preferred another god was the manifestation of a political conflict. Octavianus was able to prosper from unequal features of the two gods in his propaganda (there were images distributed all over Rome displaying Apollo as victorious and below him Bacchus as defeated and often drunk) which helped him to win against Antonius not only by physical force, but also ideologically. (Prokop, 2005)

The emperors of the medieval Holy Roman Empire needed their propagandists as well. Walther von der Vogelweide was one of the best-known. He was the first PR specialist in the German

territory who wrote hymns about the emperor and propagandistic texts against the pope.

The term "propaganda" was used for the first time in 1622 when the Pope Gregory XV established the authority called Congregation de Propaganda Fide. (Bittman, 2000, p. 80) Its main task was to consolidate the Catholic Church and to battle against the revolutionary Protestant movement. We can observe similar activities in memoirs of great leaders and monarchs, as well as those officers who took up an important political, economical or military posts. (Napoleon, Otto von Bismarck, Stalin etc.)

Edward Bernays is considered to be "the father" and the founder of modern PR. He laid the foundations of the discipline with his first compact theoretical work *Crystallizing Public Opinion* (1923). The book was written after the World War I when the map of Europe was dramatically changing due to the Versailles-Washington System (international security system based on agreements between the victorious and the defeated countries. The individual peace treaties resulted from the Paris Peace Conference in 1919 and the Washington Conference in 1921-22). A notable fact is that this period was connected with the creation and the development of a new type of mass media - radio, which offered numerous possibilities of information spreading. Bernays mentions in his book the importance of creating a new profession, "a public relations counsel". *Crystallizing* elucidates the "instruments and techniques" that PR professionals use to mold public opinion on behalf of their client's interests. (Bernays, 1923).

It was Bernays who suggested that such activities should be referred to as public relations, and therefore differentiated from the operations held before or during the World War I, labelled as propaganda. As a nephew of a famous psychiatrist Sigmund Freud he realised that PR has to be an interdisciplinary matter in order to produce high-quality persuasive campaigns. Therefore PR should use knowledge from psychology and other social sciences. PR in its one hundred year existence significantly progressed. Although the contemporary trends require a systematic simplification of a media release, it is necessary to realize: *"PR is based on clearness and intellectual fairness emerged from proofs, not servile behaviour or an effort to be agreeable and convenient."* (L'Etang, 2009, p. 37). Any deliberate action including PR is purpose-made, it pursues its goals, therefore it is necessary to count on the fact that percipients will reveal the aim and have a negative a priori attitude. PR instruments should use information-saturated, exact and verified data, helpful and essential for the target audience. Although as Bajčan says (2003, p. 21) we can't enforce somebody to provide information necessary for a percipient's decision-making process in any area (shopping, election, culture etc.) Information has become a commodity, however, not in accordance with the public concerns.

3. The creation of PR

When it comes to forming PR, it is important to follow several principal facts. There are millions of events happening all over the world every day, but only some of them become the information. At the same time there must be different kinds of communities which leads to this inquiry. A "hard-to-reach" audience. such as public opinion authorities (opinion leaders), financial analysts, investors etc. is the key in PR activities. The audience could be defined as a group (groups) of people who don't buy information from organizations directly (accordingly they are called a secondary target audience) but they are presumed to influence the organization's reputation, and therefore are shaping the public opinion significantly. The relations with these groups must be positive, because they are of vital importance to the corporation's success. (Pelsmacker, 2003)

At present, 80 % of PR activities consist of cooperation with media - so-called media relations. (The rest is lobbying, working with the third sector, professional organizations, customer

organizations, environmental activists, employees etc.) Media is referred to as the fourth pillar of the society or the guardian of democracy, nevertheless it is important to add that freedom of speech is a "privatized" freedom (it is subject to media ownership relations and interests). It is a common fact that the owners of media shorten the budget, quality journalism is limited, it is easier for publishers to be conformal and follow the mainstream. According to Aidan White, a long-time General Secretary of the International Federation of Journalists, the journalists have resigned the information about relevant events. Groups of dissident journalists are formed and excluded from the public communication. Their voice is silenced, they are not allowed to join the public debate. (Bajčan, 2003, p. 21) And thus, what could happen is that the predominant view of the public is not published at all.

The key factor in PR is to have good relations with media. When creating PR, it is important to grasp the interest of the main target group, and even more, to focus on what concerns the media which deliver the information to the general public. The media could decide not to inform about your activity, consequently the message will not reach its final receiver. How to bring the media to inform just about our PR activities? Either we pay for the advertisement or try to pierce into the rules of its functioning and existence, the principles of creating the press release and the theoretical resources of agenda-setting. etc.)

3.1 Agenda setting

Agenda setting is a theory established by Donald Shaw and Max McCombs, who did a research in a small college town Chapel Hill in North Carolina during the U.S. presidential election campaign in 1968. They published the observations about indecisive voters in a study called "The agenda setting function of the mass media." The *agenda setting* theory was preceded by the "Two Step Flow" concept formulated by E. Katz and P. Lazarsfeld. According to the Two-step flow model, ideas flow from mass media to a specific group called Opinion leaders, and from them to a wider population. Bernard Cohen in 1963 described the salience of topics on the public agenda concisely: "*The news programmes may not be able to tell the people what to think, but they are more than capable of telling them what to think about.*" (McCombs, 2009, p. 27). In other words, the news media are capable of setting the agenda of the public opinion.

There are three types of agenda within the theory of agenda-setting:

Agenda setting has several features in common with the instruments of "the marketing mix" concept. Its product - the information which is about to become a mediated message, goes through a certain life-cycle in case of attractiveness (development stage, introduction stage, growth stage, maturity stage, saturation and decline stage), which could make it a serial media product, a topic to continue. The public relations phenomenon is present within agenda setting's framework of promotion. It works as a communication tool used to support the reputation of the company as a whole or an individual person.

In *agenda setting*, the analyzed topic is signed as an issue and the characteristics identifying the object are its attributes. First level agenda setting deals with the influence of 'issue' salience and the second level deals with the influence of 'attribute' salience.

The agenda setting theory consists of concepts:

- 1) *Assignment of status*, e.g. the growth in salience of a person at the centre of media attention is considered to be the first level of *agenda setting* (an issue of *agenda setting*)
- 2) *Stereotypization* is the second level of *agenda setting* (attributes of the issue)
- 3) *Building up an image* is also a part of the second level *agenda setting* (attributes of the issue).

4) The *gatekeeping* concept belongs to the first as well as the second level *agenda setting*.

Attributes agenda setting, a part of the second level of the theory, involving stereotypization and building up an image, is also called *framing*. "To frame means to choose certain aspects of reality reflection and expand their salience in a mediated message in such a way which promotes a specific definition, a causal explanation, a moral evaluation or a suggested solution of a problem." (McCombs, 2009, p. 133).

A frame tends to be complex, as it often implies multiple attributes. Frames are specific organization principles which include and accentuate some attributes of a lower level to the prejudice of another. The frame connects microattributes, therefore can be referred to as a macroattribute with a gestalt character and is described as an interpretation scheme (McCombs, 2009, p. 135). According to Entman framing represents: "a selection of some aspects of perceived reality and its emphasis in the text, which promotes a specific definition, a causal explanation, a moral evaluation or a suggested solution of a problem described within the message" (Trampota, 2006, p. 123).

Attributes agenda setting deals with the ability of media to influence our reflection of objects as well as the ability of the frames of such reflection to attract our attention. Framing is also a way to interpret isolated facts. If journalists choose this approach, they will deviate from pure objectivity to certain bias. Information is sent to media from particular sources and they are supposed to fit within a specific frame suitable for the purposes of the source, which most probably makes them not objective. E. g. the journalists from the most popular Slovak daily *Nový čas* often use attributes such as "young", "beautiful" and phrases like "he sends a heartbreaking message to heaven" or "this picture speaks for itself" etc.

Some characteristics of objects reach such a wide public response that they become convincing arguments about the object and the topic's salience. If the media agenda emphasizes a particular attribute of an object, it will have a direct influence on the salience of an object allotted by the public.

3.1.1. *Formation of media agenda*

There are different factors influencing the formation of media agenda (e.g. social ideology, journalist's character, PR, personal relations between the journalist and the portrayed object, news releases, briefings, etc.) It is also hugely affected by other agenda - e.g. political campaigns, interest groups, religious groups, various organizations, stories, and also scientific agenda is present (applied mainly with specialized topics - health service, educational system, industry, etc.)

A common factor in all kinds of agenda is PR building. PR specialists as well as other interest groups offer information about different events to media, however, sometimes they are pseudo-events. Ftorek distinguishes authentic happening from pseudo-events in the following way: "Media inform about an authentic event because something has happened. A pseudo-event occurs when media need to inform about it." (Ftorek, 2010, p. 107) Such an event is literally "simulated" for the purpose of media and without it the event would never exist. A typical pseudo-event is a press conference, an announcement, but also many other social phenomena in which the people involved try to force the media to advertise them. Moreover, we are witnesses to the fact that even disinformation, belonging to a black propaganda, easily becomes such an event nowadays. It is often a false fact published anonymously, but with the intention to harm somebody (Bittman 2000, p. 83). An alternative to the black propaganda is so-called fake news - a false information (wholly fabricated or twisted interpretation).

Even journalists themselves search for pseudo-events, mostly in case there are not enough authentic events to write about. A specific form of political propaganda is connected with agenda setting in news service - the escapist propaganda, which consists of drawing off the attention from political and social problems (Jiráček & Köpplová, 2003, p. 157). Media keep the public in steadiness and passivity by not pointing out the relevant issues in the society. As a result, the important events are camouflaged and the real state of the society is changed into the picture presented by the media.

3.1.2. Intermedia agenda setting

Media often inform about the same events all over again. An American sociologist Warren Breed did a research on stories flowing out from influential news organizations to many other media and assigned the phenomenon "a dendritic influence" (lineage) (McCombs, 2009, p. 165 – 166). Journalists frequently monitor and copy the stories of their colleagues in order to validate their own beliefs about the course of events on a particular day. A typical example of intermedia agenda setting is a day-to-day composition of news according to the information gained from press agencies. Editors from an editorial office create daily news with the help of the agency's database, used by 90% of the world media, which makes the news all over the world identical or at least very similar to each other (Ftorek, 2010, p. 96).

4. New trends in public relations

An assignment for PR specialists is to create such a communication instrument which would address media and attract their interest to such an extent that media grasp for it themselves and the organization would not pay for the primary publicity. This rule has been applied for several decades and it came in the first place in an article about recommendations for the dominant PR trends in 2017 published by the Forbes magazine: "Earned media come first, and paid amplification comes second." (Hall, 2016)

Newer and newer persuasive techniques in marketing have been used in recent years. The most modern trend is a guerilla marketing, mobile marketing, e-marketing, event marketing, buzz marketing concept etc. They impose requirements mainly on the creativity and the right timing of the message. They try to reach the maximum effect with minimal means, sometimes not in accordance with the law. These concepts are presented in an atypical, unexpected way, with a purpose to shock and astound the customers to such an extent, that they share the message themselves.

PR uses new trends along with "the classic" instruments (such as Press Release, Press News, Flash News, News Release etc.) and "the classic" channels (press conferences, briefings etc.). One of the most common "new media" are social networks, e.g. Facebook, Instagram, MySpace and so on, as well as applications or blogs, i.e. information and discussion websites on the Internet. A blog used to be an individual product approximately until 2009. Blogs have recently evolved into websites with multiple contributors (multi-author blogs, MAB) and their content is created by different authors. Social networks in a form of a blog (Twitter, Instagram, etc.) are referred to as "microblogs" (Blood, 2000). A microblog is an Internet website with digital content – texts, pictures, links, short videos or other objects shared via the Internet. A blog constituted of videos is called a videoblog, or shortened, a vlog. A blog containing links is known as a linklog, a portfolio presented as a blog is called a sketchblog. Besides that there are also photoblogs, and in case we use various kinds of media on our website, it is formally labelled a tumblelog" (Fabian, 2016, p.15)

As Kyška says (2015, p.74): "Political marketing managers realized the power and the range of the Internet media as the first ones. The successful presidential campaign of Barack Obama is

an example. It is assigned by specialists to be the first campaign in history, in which cyberspace was used for the effective communication between a politician and his voters.“

Social networking websites are nowadays considered to be a very effective tool for information spreading. The people, however, have purposely created and re-created social networks for a long time. They are searching for other people to share their interests, history and dreams. (Christakis & Fowler, 2011, p.17) Despite the fact that the Internet is able to address a great amount of people simultaneously and in a personalized way, it is necessary to take into consideration that according to official statistics of the most popular social network Facebook an average user has approximately 130 friends. A British anthropologist Dunbar found out that the human brain limits the number of people with whom one can maintain stable social relationships to 150 people – so-called Dunbar's number (Dunbar, 2010). A great advantage of social networks is that they allow people to maintain their relationships even without direct or regular interactions.

5. The relationship between the content and the form

At present, a great emphasis is put on the formal aspect of a presented object. Most percipients prefer a quality content with a quality package. But what would happen if we chose a product of a poor quality despite its nice packaging? Most likely we would pick the product once (maybe a few times only). If we revealed the content to be unworthy, we would pick a different product in our next decision-making process. The same situation applies to PR. PR is perceived as a form of the content presentation, that should likewise respect some quality parameters. It is a very difficult quest to accomplish a positive result with bad content and attractive covering. The content and the form stand for the philosophical categories which reflect mutual connection between two sides of natural and social reality. The content is a summary of components and processes organized in some way and together they create an object or an appearance. The form is a manner of existence and a manifestation of the content, its inherent organization. Within the mutual coherence of the content and the form, the content is a determining aspect of the object, whereas the form is a variable parameter, modified in dependence on the changes in the content and specific conditions of its existence. Additionally the form which stands relatively separate, influences the content backwards. “The form corresponding to the content accelerates its development whereas the form which doesn't match the changes in the content anymore, becomes an obstacle to its progress.“ (Rozenal', 1974, p. 376) The content and the form are two sides of the same coin.

5.1. Emotions as the key formal entities

Today's media world is referred to as the age of emotions, i.e. the age which prefers the form to the content. Emotions are a common attribute of both media and marketing discursus. Media and marketing products have addressed the audience through dramatic emotional stories for thousands of years. Their central method consists of describing and preserving a value system, which will be consecutively shared by a large group of recipients. The stronger is the story (saturated with emotion), the more distinctive will be the respondent's self-identification with the hero and his fate.

Only a small number of today's recipients is able to experience catharsis from the Aristotelian point of view. A modern kind of catharsis offered by media and marketing is attained by a simple, mass accessibility, a well-adjusted price, an easy level of rational engagement, a great amount of emotion, in some cases by changing the traditional values or reducing the number of connotative levels of understanding whose purpose is to present as simple and as clear interpretations as possible. Interpretations have become one of the fundamental topics of today's

interpersonal communication.

Emotions are activated and influenced by the sense perception (picture, sound etc.). Due to them we make an evaluation of a specific person or an event and amend our long-term memory within the learning process. We usually keep events connected to strong emotions in our memory (fear, happiness, bad luck, anger, hatred, joy), however, we don't preserve so much of the content and the sense of a happening or a statement.

As soon as a positive or a negative emotion is created, it becomes a matter of processing in the upper brain. A so-called limbic system identifies the emotion, labels it as either "negative" or "positive" and generates a correspondent reaction (fear, happiness etc.) Consequently, the upper brain analyses the sensory input in detail and an ultimate decision is made. (Du Plessis, 2007, p. 86) Du Plessis doesn't agree with a traditional strict division of the rational and the emotional aspect descended from Rene Descartes (a similar situation is associated with the Freudian terminology - the conscious and the subconscious mind). He claims that the emotional reaction and the rational interpretation (contextual memory) are created simultaneously and at the same time they are integral parts of the same system. His argumentation is based on a fact, that when a specialist asks respondents a question beginning with: "What do you think of..." their reply will always be: "I like it because..." or "I don't like it because..." Their responds reflect the processes in the brain. Firstly, the emotional reaction is coming and only later on comes the rationalization. In other words, it is called a "post-rationalization". (Du Plessis, 2007, p. 89) However, we presume that Du Plessis' new psychological paradigm can't be applied in general. Such a reaction is not typical for all of the respondents. Not everyone decides and replies primarily in regard of the emotional point of view. An individual would come to this "ideal" state if he had an unlimited number of sources at hand, but rational thinking, thrift etc. would still play an important role. Just like there are several kinds of recipients in the perception of art, we also have to take into consideration the rational and the discursive type of a recipient and a customer in the perception of the marketing communication tools.

The emotional aspect comes hand in hand with the rational aspect. It is true that within the contemporary state of oversupply and a great competition the emotional context hugely influences our decision-making process and the rational thinking serves the purposes of rationalization and justification of our emotionally based decisions. Du Plessis (2007, p. 86) claims that marketing and media products create emotions at first to attract the attention and not vice versa. Attention is the result of emotions, not their cause. The American Marketing Association's research came to the fact that more than 30% of the things people buy carry an emotional message. They don't serve the consumer purpose and people practically don't need them at all. (Mazág, 2001, p. 8)

6. Conclusion

It is necessary to reflect new trends in marketing as well as the recent knowledge of the humanities subjects, especially psychology, in order to create and distribute PR messages. However, we suspect that the upcoming trends are more or less a manifestation of changes in the formal aspect. The form is a complementary part to the content which should be dominant. When the form prevails the content in a creative process of a message, such a product could appeal to a customer but only when it comes to the first impression. Any information products based only on a motto: "Shock and amaze!" are often primitive, deformed or even fabricated. A recipient distinguishes whether the form brings the content promised during a long-time activity (particularly after the purchase of a product, after the elections of a political party etc.) If the product is insufficient, the customer approaches it with disapproval, disappointment, or even anger. The charm of the first impression has a limited time of existence.

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The Influence of Information Technology on Agricultural Machinery

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Abstract

Information technology has developed in a rapid way in the last few decades, which resulted that it gained its importance in agriculture as well. Modern tractors have well developed user interface and on-board computers. Precision farming is getting widely spread in agriculture, which results in developed machines: we are in a period in which the machines are directed by GPS system. This is only the beginning of the new age, since technology develops continuously and within a few decades robot tractors without operators will be widely used. There have been some tests carried out recently.

The operators have to accommodate continuously to the development of information technology in modern tractors and harvesting machines. They had to switch from manually driven tractors to automated ones.

During our research, we examined the effects of these on-board computers due to the development of information technology on the operators and owners, how they can accommodate to the new situation. By the help of questionnaires, we surveyed the opinion of the operators and their managers about the on-board computers.

In our study we present the experiences of the application of the modern devices, the opinions of operators and machine users, and also the experiences and the drawn conclusions gathered personally on farms.

Keywords: *information technology, modern agricultural machines, application of on-board computers*

JEL Classification: *Q13, Q18*

1. Introduction

Information technology has been developing at a fast pace in the past decades so it became unavoidable for it not to gain ground. New information tools help to accelerate reports within the company and provision of information resources indispensable in the decision making processes (Jelonek and Turek, 2016). As a result, the developed user interface and on-board computers are integral parts of today's modern tractors (Lénárt and Tomor, 2007). Of course, the implementation of information technology systems will require many resources and investments (Hajdú et al., 2008).

Machine operators also had to adjust to the development of information technology and the modern tractors: they had to use the sophisticated user interface and switch over from the manually driven tractors to the automated ones.

In this article we examine how the on-board computers, developed with the help of information technology, effected drivers and machine operators and how they were able to adjust to the new situation.

2. Material and method

The real breakthrough was the appearance of Information Society and Information Technology (IT) and use of these on a massive scale. The derivation of this Information Technology in the agricultural field is the so-called precision agriculture (Tamás, 2001).

The defining elements of precision agriculture are: continual precision localization, analysis of the geographical information system and the remote sensing toolkit and the highly automatized field work (*Györfy, 1999*).

The majority of computers are on-board computers (board computers) used on mobile machines or aggregates. In state-of-the-art tractors there is an on-board computer which is connected to the GPS, or the GPS can be connected as a supplement, thus these machines are capable of carrying out precision agricultural activities (*Németh et al., 2007*).

With the help of a questionnaire we conducted a survey and then displayed in diagrams the general opinion of the participating workers, who use agricultural machinery, and presented what their view is on the on-line computer system. We carried out our study with the inclusion of four companies, 42 agricultural machinery operators, and 8 managers.

The generations are very clearly distinguishable at the examined companies, so we were able to examine the effect of modern tractors on the operators from the point of view of the younger and older employees.

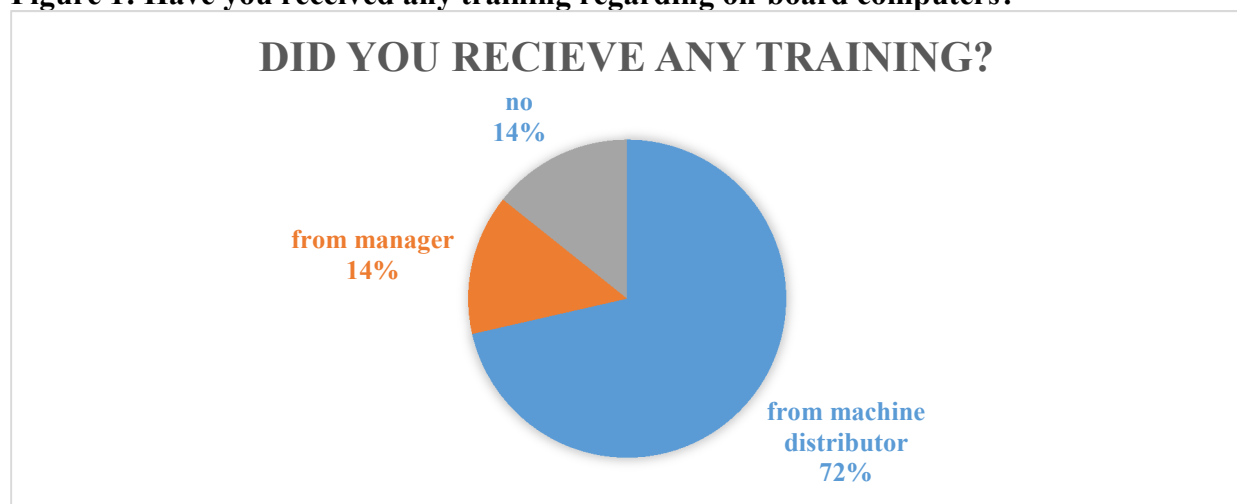
3. The effect on the operators of agricultural power machines

The first question was regarding the age of the respondents. Based on the received answers, the respondents can be grouped according to three categories: those between 18-30 years of age, those of the age between 31 and 50, and those above 50. One quarter of the respondents was between the age of 18 and 30, 37.5% was between 31 and 50, while the ratio of respondents over 50 years old was 37.5% too.

The next question was aimed at the number of years spent in farming. 37.5% of the respondents have worked in farming less than 5 years, and there were no respondents in the 5 to 15 years category. 25% of the people have worked in farming for 15-30 years and 37.5% of them have worked for 30-50 years.

The questions following this are already related to the on-board computers and the work carried out with them. First we examined if the workers received any training regarding the on-board computers and if so, from whom. As it can be seen on (**Figure 1**), 72% of the workers received training from the machine distributors, while 14% was trained by the managers. The remaining 14% replied that they did not receive training.

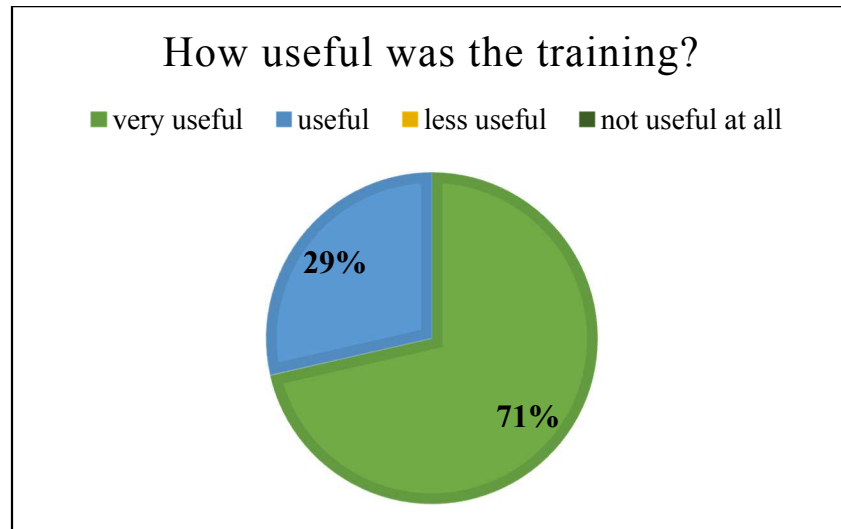
Figure 1: Have you received any training regarding on-board computers?



Source: Author's own research

Since for the previous question (Figure 1) 14% of the workers replied that they did not receive training, the question of how useful the training was (Figure 2) was only relevant for the remaining 86%. 71% of the respondents thought that the training was very useful for him and 29% considered it useful. Nobody marked the “less useful” “or not useful at all” answers. Therefore we can conclude that the trainings were truly useful for all of them, and mainly for the older generation who had to adjust even to the modern tools as well. For example, touchscreen is such a tool.

Figure 2: How useful was the training?



Source: Author's own research

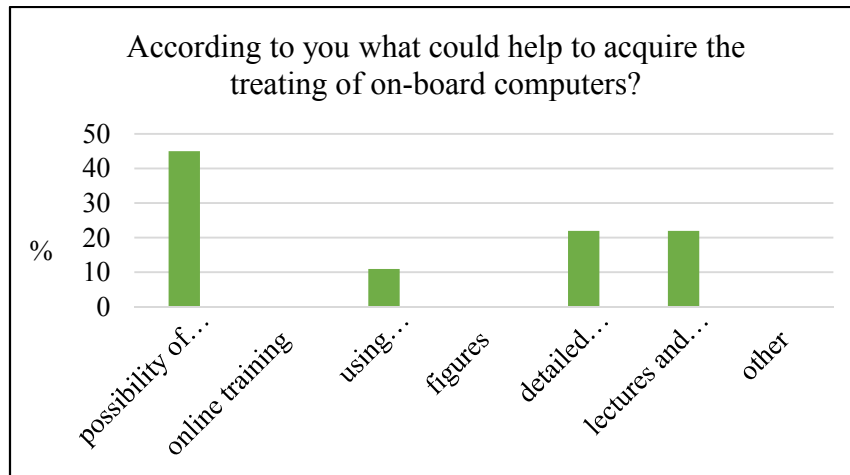
We wanted to know if the respondents deemed the received training sufficient. When responding to the question of whether more training was needed or not, 62% said yes, while 38% said no. So it seems that machine operators know that they would need more training to make up for the lack of knowledge and to be able to handle the machines properly that is, to fully exploit the possibilities provided by the machines. Those respondents, who said no when answering this question, are probably satisfied with the level of knowledge they have and they consider it unnecessary to have further training.

When asking question number 6 we were looking for the answer to the question whether further training would affect the efficiency of the work. 87% of the respondents felt that training would have an effect on efficiency of the work, and only a small segment, just 13% of them thought that extra training would not affect the efficiency of their work. This question is closely related to the previous one. In that case 38% thought that they did not need any more training, whereas here only 13% felt that training would not affect the efficiency.

When asking about what would help the operators when learning how to operate the on-board computer (Figure 3), we listed a few aspects and provided the option for the operators to write down their ideas and what would help them in learning the use of these machines, but nobody wrote other answers. 45% of the people felt that being able to try out the machines would make it easier for them to learn how to use the equipment. The detailed manual was marked by 22%, which is interesting because all tractors and equipment have a complete user's manual, the so-called operator's manual, which explains everything in detail about the machine and about its use, maintenance, settings and error codes. Furthermore, all on-board monitors have a user's manual. Although the operators, according to their own admission, read the manual of the tractors regularly, supposedly they do not read the manual for the on-board monitors.

The application of theoretical and practical hours was the same, 22%. When asking about the necessity of more training and if training affects the efficiency of the work, many respondents said yes. The low percentage might be due to the workers marking only one answer, whereas next to the questions it is written that more than one answer can be marked. Training videos were only marked by 11% of the respondents. This is possibly due to the fact that many people can only acquire knowledge if they are sitting in the machine and they themselves carry out the instructions on the spot. Online training and figures received 0%; the workers probably could not imagine how these things could be done in real life.

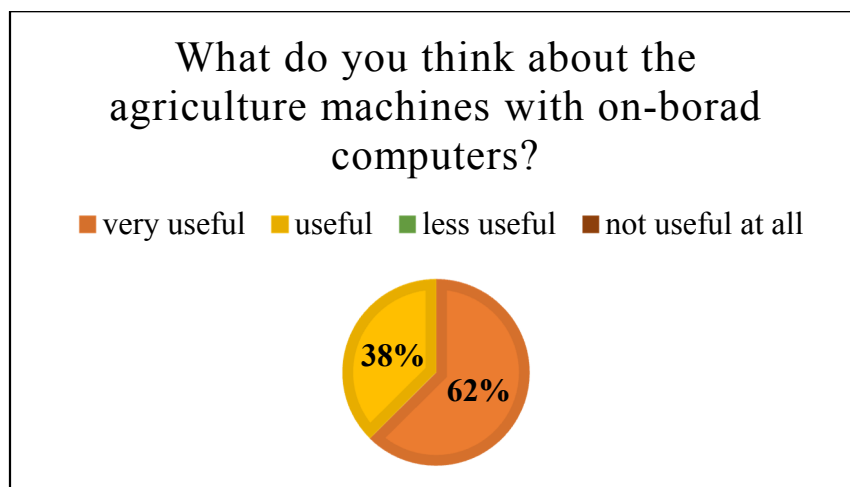
Figure 3: What could help to acquire the knowledge to operate on-board computers?



Source: Author's own research

When asking about the agricultural machines with on-board computers, 62% of the workers considered them very useful and 38% responded that they were useful (Figure 4). The other two options were not marked by anyone, which shows that the workers of the company understood that these machines serve their purposes. With the use of on-board computers the work is much quicker and more precise, and work is not as demanding as it used to be with the old-type of tractors or with those which do not have these modern systems.

Figure 4: What do you think about agricultural machines with on-board computers?

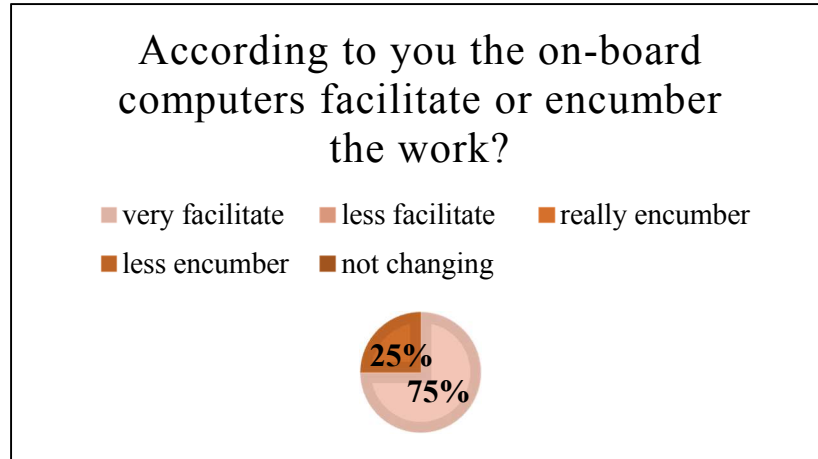


Source: Author's own research

75% of the respondents thought that on-board computers make work much easier (Figure 5). The majority of operators realized that these machines unburden them. Having the GPS and

automated steering, they only have make sure the machines are set properly, which might result in better quality work and shorter work time. 25% of the respondents thought the computers facilitate work less. Neutral or negative response was not received here.

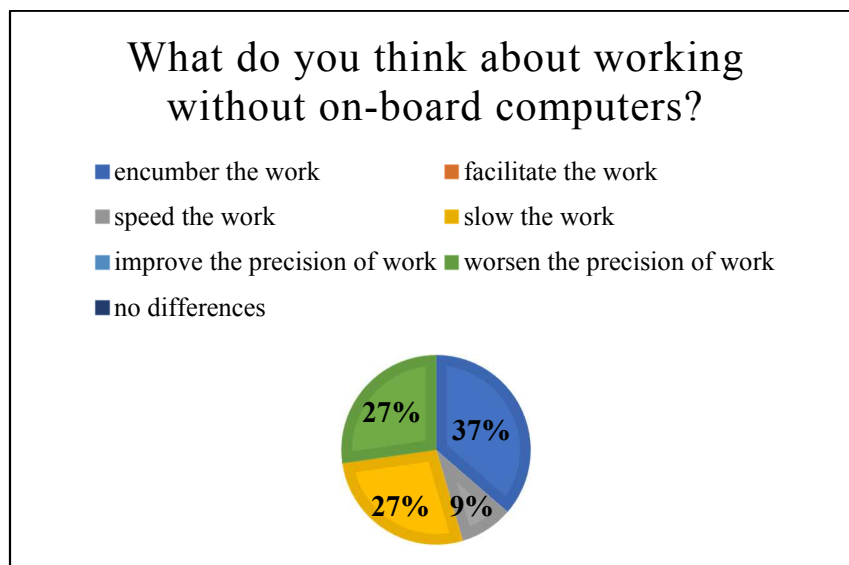
Figure 5: According to you the on-board computers facilitate or encumber the work?



Source: Author's own research

Workers had the opportunity again to give more than one answer to the question what their opinion was about work without on-board computers (Figure 6). 37% of the respondents thought work was made harder if the tractors did not have on-board computers. Without on-board computers the workers have great difficulty working and young workers are not really able to operate these machines, according to managers. 27% said it slows work down and again 27% thought it made work less precise. Without using on-board computers the proper execution of the work processes needs a lot more attention, which in turn can cause sluggishness. Less experienced operators might go slower to be able to stay on track along the planting rows. 9% of the respondents marked the answer that it speeds up work.

Figure 6: What do you think about working without on-board computers?

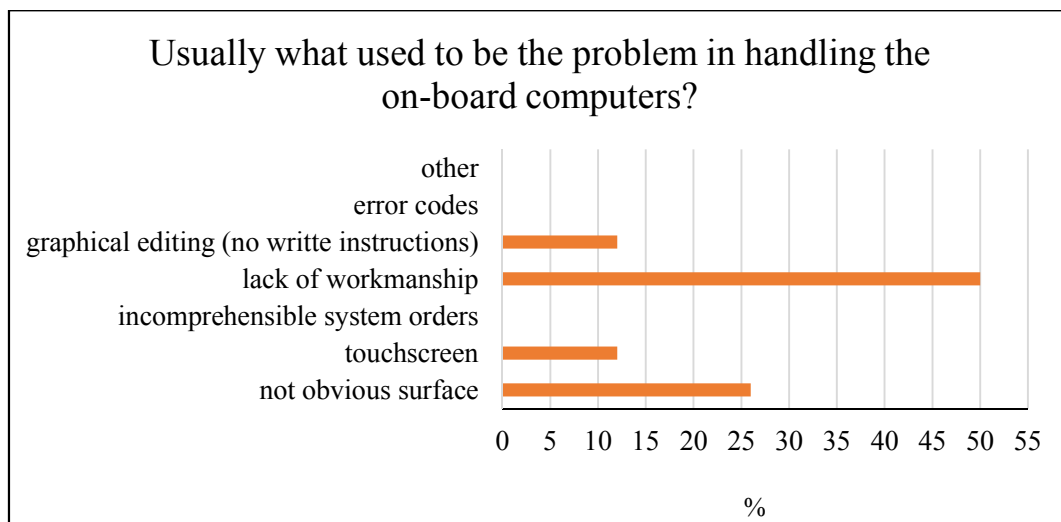


Source: Author's own research

According to the survey 12% of the respondents thought operating on-board computers as a complicated task. According to the managers the reason for this might be that part of the workers think – even if only slightly – that operating the system is difficult for them.

Respondents had the option to give more than one answer to the question which was aimed at detecting what caused difficulties when operating on-board computers. The biggest problem in operating the computers is the lack of knowledge domain (50%). Operators of farming machines realize that they do not have enough knowledge and they should improve. This can be seen in question number 5, where 62% of the respondents thought they needed more training. The second biggest problem with 26% is the “not clear interface”. Graphical display and touchscreen was marked by 12% of the people. Incomprehensible system instructions had the value of 0%, which is due to the fact that these warnings are always short, one or two words only, the monitors display the words in Hungarian, and an audible warning can be heard as well. Nobody marked the option of error codes. Error codes usually are comprised of a letter and some numbers. The machine displays these if it detects a failure of some kind. Since all tractors have a manual where the error codes are listed, probably this is the reason why the understanding of these does not cause problems for the operators. Respondents did not mark the option “other” here either (Figure 7).

Figure 7: What constitutes the problem when operating on-board computers?



Source: Author's own research

87% of the workers felt that employers support them properly in their endeavours to learn to operate the machines easily and fast. Indeed, managers provide opportunities for the operators for learning, trainings and they sign them up for courses while financing these activities. It is in the interest of employers that the operators would be able to exploit the opportunities provided by the machines and that they would operate them properly. 13% of the workers thought that the employer does not support them, and these people are probably those responders who said in question number 3 that they did not receive training about the on-board computers.

Finally, our last question was aimed at the GPS system since it has great importance in how precise the work process is, and it is connection with the automatic steering system in the examined implements. According to 87.5% of the respondents the GPS system greatly facilitates the work of the operators since this system is the reason why the machines can go in a straight line along the rows in the evening or in foggy weather. However, 12.5% said that the

GPS systems make the work of operators harder. Although they could have given neutral answers, nobody marked those.

4. The effect on the work of the managers

The managers in the office can keep track of the movement of implements by using GPS systems. On a desktop computer they can follow retrospectively, based on their licence plates, which implement worked where and how many hectares it had cultivated, on what trace it had moved and where it can be found at the given moment, and these information may provide the essential information for the management in order to make well-based decisions (*Lencsés, 2014*). In the dairy sector, automatic milking systems (milking robots) are operated in a similar way: the milking system's devices collect important information about milk yields and animal health, which may give information for the employees or even the management about the possible problems, thus, they can make the required steps in time (*Lencsés et al., 2014*).

Managers also can observe who and when and for how long had stopped the machines. At the examined companies these systems are used mainly for monitoring and mostly in cases where they consider the cultivated hectare done by a certain worker too little.

The owners think that the attitude of people towards modern machines is very much age-dependent. While the young workers can operate them well and they are open and quick to learn the operating procedures of the new machines, the older generation is considered too old, who can only carry out those well-practised activities which are necessary for the basic operation. At the same time the opinions on the older generation is divided: there are those, who can operate the machines but do not want to do it, and there are those who do not know how to use it but would like to learn, and also those, who have the knowledge and use it, too.

According to the opinion of the owners if workers used the options provided by on-board computers properly and had these options exploited, it would make their work so much easier.

The interviewed managers also said that tractors with on-board computers have disadvantages. They say that since the system monitors every aspect of the work instead of the operators, the workers became lazy throughout the years and negligence became prevalent. Although the younger generation operates technically monitored systems much better, it cannot be said that they would do a better job because in case of system issues, if it freezes or the GPS signal gets lost, they are not able to drive the machine along the rows so precisely as their older peers.

5. Summary

During our examination the aim was to examine and show the effect of Information Technology on agricultural mechanization, mainly the examination of the effects produced by on-board computers on the operators and managers.

With the help of a questionnaire we found out the opinions of implement operators about machines equipped with on-board computers. The majority considered working with those machines much easier and much more precise, which had on-board computers already. All of them agreed that although they know how to operate the implements, they would need more trainings and this was also supported by the interviews carried out with the managers.

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Attitude of Agribusiness Entities to Green Management in Slovak Republic

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Abstract

Thinking green means being aware of the connection with the world and perceive the consequences our everyday activities have on nature. However, environmental protection does not involve only individuals and groups, but also organizations. Representatives of these organizations should be conscious of this responsibility and the ecological principles should become an integral part of their business philosophy. Factory managers should be fully aware of the impact of their decisions and the effects of their business activities on the environment. The concept, which aims to continuously improve the environmental management basis, is called green management. The main idea of green management is to increase the number of employees responsible for environmental activities, the development of systems of environmental management and communication support in the field of environment and biodiversity preservation. Green management should be nowadays integrated into all spheres of business. The main aim of this paper is to highlight the importance of green management and its enforcement in enterprises operating in agricultural sector and evaluate the attitude of the agricultural businesses to green management in Slovak Republic.

Keywords: Agriculture, Green Management, Social Responsibility

JEL Classification: M14, O13, Q15, Q57

1. Introduction

Human activities are now so pervasive and profound in their consequences that they too affect the Earth on a global scale in complex, interactive and accelerating ways (Joseph, 2009). Growing global concern on climate change and widespread awareness towards environmental sustainability and cleaner production are driving organizations worldwide to implement procedures to efficiently manage the elements of organizational sustainability that include emissions, effluent discharge, waste disposal and energy efficiency (Mustapha et al., 2016).

Sustainable practices are more than ever on the agenda of organizations, triggered by a growing demand of the wider population towards approaches and practices that can be considered green or sustainable (Brocke – Seidel – Recker, 2012). The question, how to improve green management, is very important for the sustainable development of the world (MA, Yuan Yong et al., 2016).

Environmental behavior and environmental care are based on the use of environmental technologies in production, what is a prerequisite for achieving a prominent position in a global competitive environment in the field of environmental quality. The company's environmental profile assesses the company's approach to protecting the environment by using technologies that reduce environmental burden. The use of environmental tools in the company brings an improvement in the state of the environment (Teplická, 2007). In practice, there are more promoted new instruments in the creation and protection of the environment with a very preventive character. The strategic objectives of environmental management should be geared

towards implementing measures to reduce the organization's environmental burden and improving environmental protection activities throughout the reproduction process (Piatrik, 2012).

One of the "green issues" is the knowledge of key global problems and their changes. The list of these key global problems is very long. These are problems, which are related to depletion of natural resources, global warming, pollution (air, water, land), industrial accidents and toxic waste. (Robbins – Coutler, 2004). Managers and organizations can choose from a number of activities which are geared towards protecting the environment. Some organizations do activities beyond the framework of legislation and develop their social relationships. Other organizations make major business changes, transform products and processes and they are cleaner (Ubrežiová et al., 2013).

Global environmental issues pose a common challenge to the North and the South of the world in terms of development of new technologies and affirmation of new professions (such as green jobs). In the 21st century sustainable agriculture is expected to improve the working conditions and the life standard of economically backward and vulnerable groups. This is the road map to be followed in order to create a more equitable society and to guarantee a decent future to the upcoming generations (Bianco, 2015). The green management sees a profound rethinking of the old way of working, and designing the birth of emergence of new professions. These are specific skills, related to the thousand ecological implications of the ecologic reorganization of the economy, from mobility to the food system, from the conservation and intelligent sustainable management of ecosystems infrastructure. Green management requires a theoretical and practical training of employees, qualified (for functions) and specialized (for issues), in order to define professional profiles in line with the demand for green jobs (Viola, 2016).

2. Data and Methods

The aim of the paper is to evaluate the attitude of agricultural enterprises in Slovak Republic to the green management. In order to achieve the stated objective the examined issue is addressed to reflect the real situation from the practice of business entities and to provide relevant information on the implementation of green management in agriculture. The report is drawn up on the basis of the knowledge gained by studying literary sources, expert articles and publications dedicated to the topic of green management.

The objects of the investigation are business entities active in the field of agriculture in the territory of the Slovak Republic. In order to obtain the data that form the basis of the research the best appeared to be rather often used technique of empirical research, questionnaire survey. In the questionnaire the questions about subjective circumstances outweigh, therefore the issues of attitudes and knowledge of the concepts. Questionnaire form contains the semi-open questions and also closed ones. Some of the questions are dichotomic, others alternative and in some of them there is also a space for individual answers of the respondents. Questionnaire form was sent to the agricultural enterprises of different sizes and with different legal forms of business electronically. Of the total number of sent questionnaires 41 % returned (59 questionnaires).

For the purpose of an objective assessment of the attitude of farms to the green management, numbers of methods of scientific investigations have been chosen, such as the method of analysis, synthesis, induction, deduction and comparison. For the processing of the results of the questionnaire survey statistical program SAS was used and within it, the chi-squared test of the independence that we used to identify the correlations between the achieved results.

χ^2 – test for independence has a broad spectrum of use, and this is reflected in the possibility of its application in the identification of the independence between two quantitative characters, but also between the qualitative and quantitative character. H_0 says that between qualitative characters is not statistically significant dependence and H_1 says the exact opposite. The basic idea of this test is a comparison of the observed n_{ij} (empirical) frequencies and expected e_{ij} (theoretical) frequencies assuming the validity of the null hypothesis.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^s \frac{(n_{ij} - e_{ij})^2}{e_{ij}} \quad (1)$$

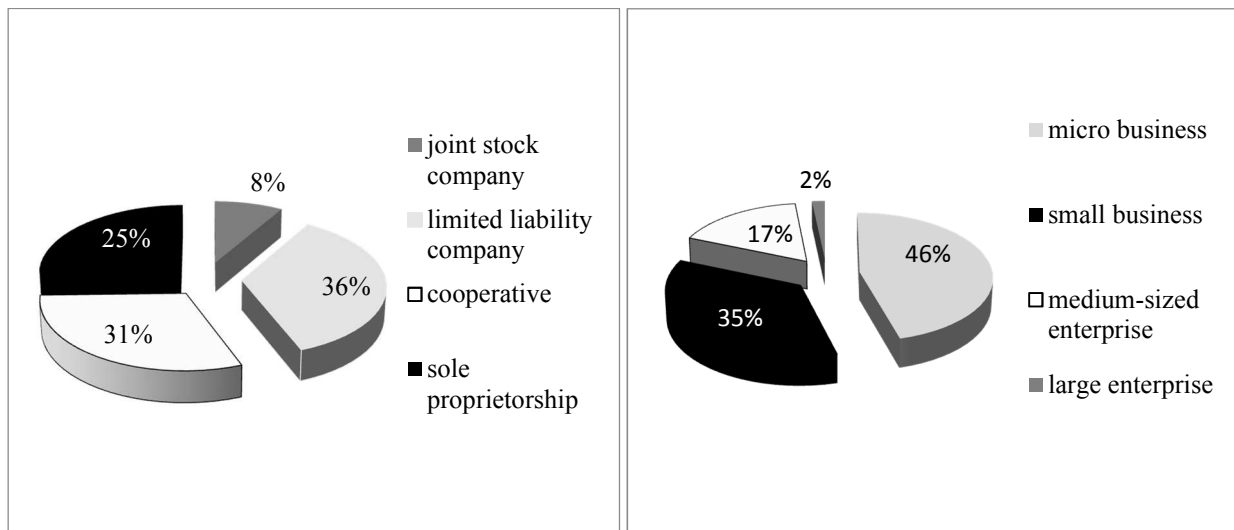
where:

- n – scale of the sample,
- n_{ij} – empirical number of statistical units,
- r – the number of modules I_i (intervals), $i = 1, 2, \dots, r$,
- s – the number of modules J_j (intervals), $j = 1, 2, \dots, s$,
- e_{ij} – theoretical number of statistical units.

3. Results and Discussion

We have sorted the respondents who replied to the questions in the questionnaire, according to the legal form of the business, and according to the criteria of size (number of employees) as Recommended by the European Commission. From the following Figure 1. the distribution of the respondents can be seen, in terms of legal form and size according to the recommendations of the European Commission (less than 10 employees - micro business, less than 50 employees - small business, less than 250 employees – medium-sized enterprise, more than 250 employees – large enterprise).

Figure 1: The distribution of business in terms of the legal form and size (number of employees)



Source: own processing

In recent years, the great changes in the lifestyle of the people can be seen, their life strategies changed and also approaches to quality of life. In a business environment the aim of preventing environmental pollution enhanced to a higher level, which requires that business activities are conducted with regard to the environmental aspects. And so the first, very important issue, on which we have been looking for the answer was, what the enterprise managers picture by the term of green management. Most of the surveyed respondents replied to this question very briefly and simply, that green management aims to protect and sustain the environment. Some

respondents were more detailed in its questionnaire response. They stated that the green management means managing the company, so as to minimize the negative impacts on nature and the environment, in order to eliminate the waste and leakage of pollutants as well as the adverse environmental impacts of new projects. Green management, according to some respondents, ensures all activities aimed at the elimination of the excessive drawing of natural resources, of which the results are measurable. Other respondents believe that the green management should lead to efficiency of production processes, to raise the environmental awareness of employees and maintaining the ecological stability of the country. Among all respondents, there was also found one which has expressed his opposition to the green management. He called it only as a modern expression that hardly anyone understands and in which there is nothing substantial.

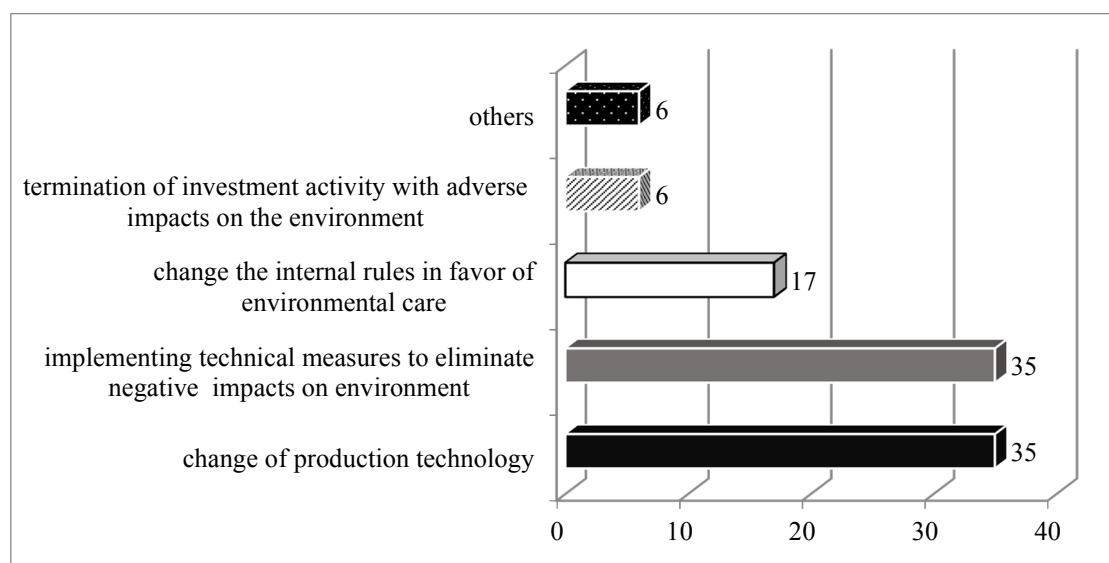
In response to this question we have tried to discover a correlation between enterprise size and the fact that businesses organize or participate in training related to the protection of the environment, to which we have used chi-squared distribution test. The use of this test was relevant, since all the conditions have been met, and that the range of the sample was greater than 50 and abundance in each class was more than 5. This test reveals that there is no difference between the organization of the training or engagement on them depending on the size of the enterprise. The result of the chi-squared test, therefore didn't show any significant dependence of 0.05 level. This means that the companies are engaged in training or organize them regardless of whether it is a micro, small or medium-sized businesses.

Table 1: Correlation between enterprise size and the organization or participation in training courses aimed at the protection of the environment, measured by the chi-squared distribution test

Statistic	DF	Value	Prob
Chi-Square	2	1.6595	0.4362

Source: own processing

What is the attitude of agricultural enterprises in Slovak Republic to a green management was an issue that we tried to cover through the question of which purpose was to determine whether, in the interests of environmental protection activities, such as change of production technology or other were carried out. In this question respondents could select more than one option, or could use an alternative to open answers. The most frequent answers were that the companies in the context of green management, acceded to change production technology (e.g., exchange of technological device, change the input of the materials...) to support an active approach to environmental protection and took different technical measures to eliminate adverse impacts. These activities are carried out by 35 companies, as stated by respondents. 17 respondents reported that the companies they represent have changed the internal rules in favor of environmental care. Termination of investment activity with adverse impacts on the environment implemented 6 agricultural enterprises. Six of respondents used the choice of open answer which as other environmentally focused activities carried out in companies, which they represent stated also compliance with all the rules for organic production, restricting of use of technologies that are harmful to the environment, the use of organic forms of nutrients, or waste management.

Figure 2: The implementation of the activities in order to protect the environment

Source: own processing

Business managers should lead staff to responsible approach for protection of the environment and to develop the social responsibility in them. Our next question was therefore focused on whether the employees are motivated to make such an action, which is considered to be environmentally acceptable. Of the total number of 41 respondents, 69.5% indicated that they motivate the staff to the activities that contribute to the protection of the environment. The remaining 18 respondents (30.5%) replied to this question negatively. Respondents, who answered the question about the motivation of the employees positively, should further indicate what motivation means they use, and what kind of motivation of employees are adopted. Most of those surveyed said that in the company, that are representing they mostly apply non-financial forms of motivation. These have taken the form of tickets to cultural events or vouchers for relaxing vacations. Some employers are trying to motivate their employees by carrying out a variety of trainings, in which there is provided refreshments for participants of training and that at the same time act as a means to strengthen the team. In turn, other respondents indicated that staffs are motivated only by compliments or by highlighting the importance of this issue for the next generation using enlightenment. In certain cases we can talk also about financial compensation, while some respondents have indicated that in employees this form of motivation brings the best results. Either it is a percentage discount from the prices of the products, or the rewards directly in monetary form.

In connection with this issue we are once again looking for a correlation between enterprise size and the fact that businesses motivate their employees to the activities aimed at the protection of the environment. In researching this subject, we again have used chi-squared distribution test, as once again there were met the conditions of its use. Whereas this test did not reveal a dependency, we accept the hypothesis H_0 .

Table 2: Correlation between enterprise size and the motivation of the employees to activities that contribute to the protection of the environment, measured by the chi-squared distribution test

Statistic	DF	Value	Prob
Chi-Square	2	4.2472	0.1196

Source: own processing

Some businesses are trying to engage into the programs to protect the environment not only their employees, but also customers, and thereby enhance their environmental performance. According to the responses from the survey of the total number of 43 respondents (72.9 %) representing agricultural holdings in Slovak Republic, assessed that they are not making efforts to integrate their customers into activities aimed at taking care of the environment. The remaining 16 respondents (27.1%) responded to the question positively, confirming that their overall aim is to maximize customer satisfaction by constantly responding to their requirements, and adapt the range and content of the provided products and services to these requirements. Public opinion currently favors more businesses that do not neglect environmental protection and that are trying to produce their products or provide their services environmentally friendly, and that some companies are beginning to be aware of it. Respondents representing the companies that engage their customers into their environmental activities should give a concrete example of the activity. Some businesses organize various events such as the planting of new trees, or organize conferences for example: world water day, or conferences or events of a type of open day, where they present their attitudes, explain and show examples from practice. Environmental awareness of their customers are companies trying to support by providing different discounts on the disposal of electrical waste and other recyclable waste, or also on the disposal of waste to specialized businesses. According to some respondents, the reward for customers may also be eco gifts when shopping for a certain predetermined amount, e.g. eco canvas bag.

After we used the chi-squared distribution test again, the results were the same as in the assessment of the previous two questions. We evaluated the relationship between enterprise size and the efforts of enterprises to engage also their customers in activities for the protection of the environment. Chi-square pointed out the fact, that the enterprises engage or do not engage their customers in these activities, no matter what their size.

Table 3: Correlation between the enterprise size and engaging customers in environmentally focused activities measured by Chi squared test

Statistic	DF	Value	Prob
Chi-Square	2	2.7101	0.2579

Source: own processing

The need to protect the environment from pollution is still one of the major themes of the modern world. The last two issues of the survey forms were oriented on, whether the companies fulfil their obligations to ensure the protection of the environment beyond legislation, so that they become "cleaner". Of the total number of questionnaire respondents, 46 (78%) of them reported, that they are not implementing any measures or activities directed to environmental protection beyond the scope of the legislation. The remaining 13 respondents (22%), by contrast, said that the companies they represent focus its efforts in the context of its business activities not only on legal measures but also to measures that will enhance their environmental performance.

By a follow-up question, we were trying to find out which specific activities are being implemented by businesses beyond the scope of legislation. In some enterprises organic farming was introduced, other businesses try to minimize the nitrogenous fertilizers, fungicides, and herbicides are not used and they are more and more trying to incorporate bio products in their production. Despite of all these activities it is a great braking feature, that less stressful formulas on the environment are much more challenging financially, as some respondents states. In the process of the cultivation selected companies are implementing agro-

environmental measures, in the sense that they use more agro technical procedures. A key step is to build a photovoltaic power plant for the company's own needs, as one of the respondents said. By activities such as cleaning rivers, wells, meadows, or by co-operation with protected landscape areas, some businesses try to develop their environmental awareness.

4. Conclusion

The main aim of this paper was to evaluate the attitude of Slovak agribusiness entities to green management. The results of the questionnaire survey revealed, that the most of the surveyed respondents (represented by different business entities in terms of the legal form and size) had the right ideas on the concept of green management. Most of the respondents replied, that green management's aims is to protect and sustain the environment. Slovak agribusiness entities were engaged in various activities to protect the environment. They selected technological changes, which are more environmentally friendly. On the one hand, entities engaged in environmental protection activities their customers and employees, but on the other hand, only 22% from them tried to protect environment beyond legislation because it was financially demanding. The Chi-square test brought the same results when we researched the dependences between size of the enterprise and motivation of employees and customers and whether enterprises organized or participate in environmental training. In these three cases, the Chi-square test didn't discovered the dependences. Finally, may be said, that Slovak agribusiness entities have a positive relationship to environmental protection. It is important, that the issue of green management will be enforcement in enterprises operating in agricultural sector of entities, which do not engage in environmental protection.

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Construction of a Sustainable Social Security System in Poland

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Abstract

The paper about the construction of a sustainable social security system in Poland is an attempt to define the types of changes that are required for the improvement of this system at the beginning of the 21st century. Optimisation of the system should be understood as financial equity and obligatory application of axioms of commonship and unification.

In order to construct an effective social security system it is necessary to define the following factors: a catalogue of social risks, a method of benefit funding and parameters of the benefits to be paid. Any structurally and financially sustainable system must be designed so that all its elements are compatible both with social risks that are protected in the system and with the elements of the social security system. The paper presents the Polish social protection system together with the social security system, the risks that are protected in the social insurances and a concept of changes that should be made to optimise the social security system.

Keywords: axiom of commonship, axiom of unification, system construction, optimising, financial equity, social security system

JEL Classification: H50, H55

1. Introduction

A country's social security system exemplifies government's social policy towards its citizens. The state as an organization must ensure citizens receive the assistance where they become unable to support themselves through their own labor due to adverse circumstances. The state provides assistance to such people through the social protection system which protects against the loss of effectiveness and damage to health and loss of capacity to be employed, old age, incapacity, death of the primary breadwinner of a household, sickness, maternity, unemployment, injuries and accidents at work, disability or age-related impairment. The range of social security services varies between countries and there are different state policies regarding provision of social assistance. The methods applied depend mostly on the social security policy. In Poland, the principles of the social market economy model are used. In pursuit of putting this model into practice, for the last 27 years the Polish government has implemented a number of system changes, one of which was streamlining of the social security system in 1999. So far, the system apparently is being executed but not yet finished and the reform requires essential adjustments.

This paper attempts to briefly analyze the effectiveness of the Polish social security system and presents proposed changes to improve the system. A tool used in the study is an economic and systemic analysis, and the period examined are the years 2010-2015.

2. Social security system and its axioms

A sustainable social security system was first defined at the end of the 1990s; the authors of the system reform assumed that the system had to ensure maximum social protection to all citizens, that the costs associated with the reform would never be higher than the economic capacity and that the costs of transformation needed long-term financing. The expected results of the reform

include creation of a stable system which will function to provide for the wellbeing of many future generations. In the implementation of the reform, modern concepts of an effective social security need to be taken into account; the reformed system will require the compliance with the principle of social justice¹. It can therefore be presumed that the system which was designed (though not quite consistently) and implemented should operate in line with the logic of insurance policy rooted in social risks:

social risk → contributions (social security trust fund) → adverse event → loss → benefit.

Theoretically, each social security system should be based on 3 axioms: commonship, cohesion (unification) and effectiveness. The system commonship is understood as a solution allowing covering of all citizens of a country. System cohesion refers to the application of the same rules and principles in each case and for all system participants. System effectiveness should be understood as the pursuit to balance the incomings and expenditure of the social security trust fund². In Poland social insurances are based on the principles that are obligatory in the Polish social security system. These principles include: the principle of compulsory participation, the principle of commonship, the principle of equal treatment, the principle of guaranteed benefit payments, the principle of mutuality and the principle of social justice³.

All of the above axioms and principles should be applied with no exceptions to achieve an optimal social security system. Unfortunately, in practice many exceptions are applied, in particular with respect to the obligatory axiom enforcement. This is why the system is financially insufficient, which is presented in the table below.

Table 1: A deficit in the budget of the state social security system (in millions PLN)

<i>Year</i>	<i>Social security contributions</i>	<i>State funding</i>	<i>Total expenditure</i>	<i>Social security trust fund deficit (expenditure - contributions)</i>
2010	89,378.7	60,458.9	160,842.3	71,463.6
2011	102,549.0	52,944.2	166,667.3	64,118.3
2012	121,108.5	47,701.7	174,857.4	53,748.9
2013	122,942.0	47,842.4	183,785.8	60,843.8
2014	131,102.7	38,631.9	191,710.4	60,607.7
2015	143,298.4	45,164.1	199,498.0	56,197.6

Source: In-house study on the basis of: www.zus.pl.

The deficit has occurred because the system lacks the axioms of commonship and coherence; certain vocational groups, e.g. miners, enjoy special privileges, other professions, e.g. judges and prosecutors, uniformed services (the police, armed forces, prison services, border police forces and special services) are beyond the system, while still others (farmers) have a separate system that is funded primarily (90%) by the government.

3. Development of a sustainable system based on the types of protected social risks

Every social security system must be structured to include constituents which operate in accordance with a specific construction. If a system is so perceived, it is important to analyze its elements to be able to talk about a system at all. To present the simplest structure of a social security scheme, the following elements must be included:

- protected social risk
- branches of insurance,
- benefits paid to eligible individuals out of certain types of insurance (social security subsystem).

The EU Member States have adopted the Social Security (Minimum Standards) Convention No. 102, a fundamental international social security instrument, as the basis of the implementation and maintenance of social protection schemes; however, the range of risks included in the schemes and the system financing techniques are nationally defined by each state. The social risks and benefits provided under Convention No. 102 include:

- 1) sickness – this risk is complex and inhomogeneous, it is designed to compensate for a loss of earnings as a result of illness and includes healthcare (medical) services and/or sickness cash benefits;
- 2) unemployment – a loss of earnings where a protected individual is still fit for work but cannot find a proper job;
- 3) old age – provision of cash benefits to anyone reaching the prescribed age (which should not be more than 65);
- 4) work-related accident or injury, work-related disease – a complex risk, defined in a wide and precise manner);
- 5) family and parenting support – provision of cash and/or in-kind support for low-income families raising children;
- 6) maternity – cash support and healthcare (medical) services for a protected female in relation to a loss of earnings during pregnancy, delivery, and in the postpartum period, and to a need for healthcare services in these periods;
- 7) disability – inability to perform any physical labor to a degree specified after a disability assessment, if it is total and presumably permanent or persistent and causes a loss of earning;
- 8) death of the breadwinner – a loss of support suffered by a widowed person or a child as the result of death of the breadwinner⁴.

The social security program currently applicable in Poland is presented in the table below.

Table 2: Elements of social protection in Poland

<i>Element of social security scheme</i>	<i>Type of protected social risk</i>	<i>Financing technique</i>	<i>Responsible entity</i>
Social insurance	old age, sickness, maternity, death of the breadwinner, work-related injuries and sickness	insurance (including redistribution, capital-accumulation and saving)	Social Security Administration, State insurance companies, banks, brokerage offices, insurance companies
Health insurance	health, life	insurance-based	National Health Fund and subordinate entities in each voivodeship
Redundancy insurance	unemployment	insurance-based	National, voivodeship and regional labour offices
Disability benefits	disability	insurance-based	State Fund for Rehabilitation of the Disabled Persons and subordinate entities in self-governed circuits
Social welfare	poverty	social assistance	Voivodeship and regional social welfare centers
Family benefits	child poverty	social assistance	Voivodeship and regional social welfare centers

Uniformed service pension/benefit ¹	old age, sickness, maternity, death of the breadwinner, work-related injuries and sickness	non-contributory pension	Disability benefit authorities in the Ministry of Interior Affairs, Ministry of National Security, Prison Services, State Fire Services
Farmer pension/benefit	old age, sickness, maternity, death of the breadwinner, work-related injuries and sickness	non-contributory pension	Farmer's Social Security Trust Fund

Source: In-house study

Note: ¹The police, armed forces, prison services, fire services

The data presented in the table above show that the social security system in Poland is inhomogeneous, the protected risks are duplicated, various financing techniques are applied to protect the same social risks, and last but not least – different public authorities are in charge of protection of the same social risk.

Table 3: Elements of the Polish social security system

<i>Type of insurance</i>	<i>Protected risk</i>	<i>Type pf benefits</i>
pension	Old age	-redistributive pension (Pillar I), -capital-accumulation pension (Pillar II), -workplace pension (Employee Pension Scheme), -Personal Pension Plans, -Personal Pension Security Account, -attendance allowance.
disability	Long-term unfitness for work, death of the breadwinner, injuries while going to or returning from work	-unfitness for work benefit, -survivors benefit, -re-qualification benefit, -sickness benefit, -rehabilitation allowance, -compensating benefit.
sickness	Sickness, maternity	-sickness benefit, -rehabilitation allowance -parental benefit, -paternity benefit, -funeral benefit, -attendance allowance.
Work-related injury ¹	Work-related injury, accident or sickness	-one-off health-impairment compensation, -one-off compensation for death of an insured person , -unfitness for work benefit, - survivors benefit, - re-qualification benefit, - sickness benefit, - rehabilitation allowance, - compensating benefit. - attendance allowance, - funeral benefit.

Source: In-house study

Note: ¹-benefits paid only to those who suffered work-related injuries and/or accident or have work-related diseases.

Similarly as in the social protection system, the social security system is also characterized by duplication of certain risks in different types of insurance. Moreover, the scheme lacks some social risks, for example incapacity or parental risk (although it provides for the payment of such benefits as attendance allowances, parental benefit or paternal benefit).

4. The proposal concept of a sustainable social security system in Poland

A sustainable social security system in Poland should respect the axioms of commonship and cohesion (unification) and should, first of all, be financially effective. The incomings will never be balanced with expenditures unless the axioms of commonship and cohesion are implemented. The structure of a sustainable scheme should be based upon a logical matching of separate social risks in unified segments with the same financing techniques. A concept of elements of a sustainable social security system in Poland is given below.

Table 4: Proposed elements of a sustainable social security system in Poland

<i>Type of insurance</i>	<i>Protected risk</i>	<i>Financing technique</i>	<i>Type pf benefits</i>
pension	Old age	-insurance (redistribution, capital-accumulation and saving), non-contributory pension (minimum benefits – pension allowances)	-redistributive pension (Pillar I), -capital-accumulation pension (Pillar II), -workplace pension (Employee Pension Scheme), -Personal Pension Plans, -Personal Pension Security Account,
disability	Long-term unfitness for work, death of the breadwinner, injuries while going to or returning from work	-insurance-based	-unfitness for work benefit, -survivors benefit, -re-qualification benefit,
sickness	Sickness	-insurance-based	-sickness benefit, -rehabilitation allowance -funeral benefit, -compensating benefit.
maternity	Maternity, care for children	-insurance-based -non-contributory benefits (family benefit)	- parental benefit - paternal benefit - family benefit
work-related injury	Work-related injury, accident or sickness	-insurance-based	-one-off health-impairment compensation, -one-off compensation for death of an insured person , -unfitness for work benefit, - survivors benefit, - re-qualification benefit, - sickness benefit, - rehabilitation allowance, - compensating benefit. - attendance allowance, - funeral benefit.

attendance	Incapacity, disability	- insurance-based - non-contributory benefit/ pension	- attendance allowance (benefit), -social benefit -old age living allowance (full- or part-time)
against unemployment	Unemployment	- insurance-based - non-contributorybenefit/ pension	-unemployment benefit -job-seeker benefits (trainings, re-qualification)

Source: In-house study

A new, effective (meaning: financially sustainable) public social security system should be financed through individual savings (wherein the entitlement to benefits will depend on the funds gathered on individually owned social accounts) and operate as a "communicating vessels system".

Recent literature on social security and social welfare systems highlights rules, goals and effects of the social security system reform; yet, the presented definitions usually regard pension or pension/disability plans only. No concepts of a comprehensive system reform are proposed, as sickness and accident insurances⁵ are looked at as minor constituents of the plan that do not require thorough consideration. This can be explained by the fact that these latter two types of insurance usually operate much more effectively than pension or pension/disability insurances. Such fragmentary analyzing and, consequently, fragmentary reforming of social security systems causes scheme incoherence. Each social security system, both on the macro (as a part of social policy and public finance) and the micro scale (with respect to insured entities) should be considered and analyzed as a "communicating vessels system"⁶, where amendments or corrections within one of the constituents affect all other parts⁷. One of the solutions I propose is the provision of an Individual Social Security Account (ISSA) that would be operated similarly as the individually-owned retirement account implemented in 1999. Individual Social Security Account should encompass pension, disability, sickness and unemployment insurances and should use the formula of payment benefits through individual insurance savings. Adoption and implementation of this new approach would help reduce the pension fund deficit and guarantee the insured that their contributions paid to the disability, sickness and unemployment funds are not used up for the payment of benefits to other people whose benefit claims are groundless or unjustified. Each insured would have their own ISSA to be used in periods of unfitness for work or unemployment.⁸ The benefit payment scheme operated under the above rules would definitely reduce both number and volume of benefits and disability allowances. Any unused money gathered on an ISSA would be automatically shifted to the pension fund to increase the amount of a future pension benefit. Previous experience, for example within the operation of accident insurance in the Polish social security system, shows that individualization (or beneficiary-orientation) of the contribution payment has positive effects on transparency and reliability of each social system. Uniting the social protection elements into one coherent social security system and applying the ISSA concept will balance the incomings and expenditures of the social security plan, simplify the procedures and reduce, or even eliminate the fraud and deceit in the near future.

5. Summary

After the reform of 1999, the Polish social security system has been incoherent, ineffective and inhomogeneous. The implemented changes caused rapid deterioration of the financial effectiveness of the system instead of the overall improvement which had been emphatically announced by the reformers. If this situation persists and is tolerated, it will be increasingly

difficult to prevent financial failure of the Social Security Trust Fund. Recovery measures are required to improve the financial result of the Trust Fund, and system reconstruction in order to enhance the system in a relatively fast and reasonable way. System reconstruction should include parametric and, first of all, systemic changes. Such changes include not only the implementation of a system based on protection of social risks incorporated in the Polish social security system, but, in particular social risks protected by virtue of the social protection system. The extension of the risk catalogue, defining methods of financing, applying the tool of "communicating vessels system" and obligatory application of the axioms of commonship and cohesion will improve the effectiveness of the system and balance its elements in a foreseeable time. To get the expected results sooner, systemic changes should be accompanied by parametric modifications, for example: defining different criteria for entitlement to some benefits, changing the methods of benefit calculation or of benefit collection periods. However, the benefits and benefit collection periods should not be reduced obligatorily, but should be reasonably changed instead so that the Polish citizens receive the benefits sufficient to provide minimum living standards and to meet the criteria defined by the legal acts of the European Union.

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- [6] The term often used in defining economy (most often global) or economics.
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- [8] In cases if the unfitness for work was caused by a work-related injury/accident or a work-related disease, the benefits would be paid out of work-related injury/accident fund created by the contribution payers.

Prerequisites and Possibilities for Export of Slovak Agricultural and Food Commodities to the Third Country Markets

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Abstract

Slovak agrarian trade was significantly affected by accession of the Slovak Republic to the European Union on May 1st, 2004. This meant to adapt to the conditions of Common Agricultural Policy and Common Trade Policy of the European Union, which are related to the foreign trade of the Slovak Republic with agricultural and food products. These influence its development, increase the agricultural production, sustainability of farming, and support the production of food. Slovak Republic has concluded many Preferential Trade Agreements, which serve mainly to improve and maintain business relations with many countries. The aim of the paper is to evaluate the prerequisites and possibilities for export of Slovak agricultural and food commodities to the third country markets that will be achieved by analyzing the development of foreign agrarian trade of the Slovak Republic in the area of commodity and territorial structure. Submitted paper focuses on the Slovak agricultural and food products in the third country markets as well as on the foreign agrarian trade relations between the Slovak Republic and individual international groups such as EFTA, CIS, EUROMED, MERCOSUR and GCC. For the more accurate and efficient acquisition of information on the comparative advantage of the Slovak Republic is used the revealed comparative advantage index (RCA).

Keywords: Foreign Agrarian Trade, Competitiveness, Third Country Markets, Commodity and Territorial Structure.

JEL Classification: Q13, Q17, Q18.

1. Introduction

*Business is not about winning and losing, it is not a card game.
If people specialize in absolute or comparative advantages,
all of them could earn money.
Anonym*

Slovak agrarian trade was significantly affected by accession of the Slovak Republic to the European Union on May 1st, 2004. This meant to adapt to the conditions of Common Agricultural Policy and Common Trade Policy of the European Union. Slovak Republic also created conditions for improving and maintaining trade relations with non-EU countries.

In 2004, the agro-food foreign trade of the Slovak Republic had to adapt to the conditions of the European Union. Each Slovak producer and exporter of agricultural and food products had to re-orientate trade towards the common market. More than 95 percent of domestic agri-food exports went to the EU countries. Concerning the trade with third countries, we face great competition. (Matošková- Gálik, 2009)

Slovak foreign trade with agro-commodities, according to Hambáľková and Récky (2014), has been unfavorable recently. Negative balance is increasing and poses a great threat that affects the competitiveness of domestic products on domestic and foreign markets.

The Slovak Republic had to adapt to the conditions of the Common Agricultural Policy, which has significantly affected our agriculture. In the transformation of the domestic agrarian sector into market conditions, Slovak Republic has done very well and has made great progress which still needs to be constantly improved. One of the main current aims is to get the Slovak agriculture to about equal level of competitiveness to European agro-sector.

No country in the world can be completely self-sufficient and competitive. There is no such country that has the ability to produce all the necessary products for the economy. Each country should retain Ricard's theory of comparative advantages that the country should focus on producing and exporting those products where it achieves the highest productivity. (Rhee, 2012)

Foreign agrarian trade builds the relations between the Slovak Republic and individual international groups such as EFTA, CIS, EUROMED, MERCOSUR and GCC.

The European Free Trade Association (EFTA) is an intergovernmental organization set up for the promotion of free trade and economic integration to the benefit of its four Member States. The Association is responsible for the management of:

- The EFTA Convention, which forms the legal basis of the organization and governs free trade relations between the EFTA States;
- EFTA's worldwide network of free trade and partnership agreements; and
- The European Economic Area (EEA) Agreement, which enables three of the four EFTA Member States (Iceland, Liechtenstein and Norway) to participate in the EU's Internal Market.

EFTA was founded in 1960 on the premise of free trade as a means of achieving growth and prosperity amongst its Member States as well as promoting closer economic cooperation between the Western European countries. Furthermore, the EFTA countries wished to contribute to the expansion of trade globally. (EFTA, 2017)

Commonwealth of Independent States (CIS) was created in December 1991. In the adopted Declaration the participants of the Commonwealth declared their interaction on the basis of sovereign equality. At present the CIS unites: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine. In September 1993 the Heads of the CIS States signed an Agreement on the creation of Economic Union to form common economic space grounded on free movement of goods, services, labor force, capital; to elaborate coordinated monetary, tax, price, customs, external economic policy; to bring together methods of regulating economic activity and create favorable conditions for the development of direct production relations. (CIS, 2017)

Within the European Neighborhood Policy, the EuroMed transport cooperation builds on the cooperation framework launched in Barcelona in 1995. The Mediterranean members of the EuroMed partnership are: Algeria, Egypt, Israel, Jordan, Lebanon, Libya (since 2012 Libya is an eligible country for EuroMed partnership and has observer status in the UfM), Morocco, Palestine, Syria (cooperation is suspended) and Tunisia. The UfM members include, together with the 28 EU Countries, also the following Mediterranean partners: Albania, Bosnia-Herzegovina, Mauritania, Monaco, Montenegro and Turkey. The key priority of this cooperation is achievement of a safe, sustainable and efficient transport system in the Euro-Mediterranean area. (European Commission, 2017)

The EU is currently negotiating a trade agreement with the four founding members of MERCOSUR (Argentina, Brazil, Paraguay, and Uruguay) as part of the overall negotiation for a bi-regional Association Agreement. Current trade relations between the EU and Mercosur are

governed by an inter-regional Framework Cooperation Agreement which entered into force in 1999. In addition, the EU and individual Mercosur countries have bilateral Framework Cooperation Agreements, which also establish a structure for dealing with trade-related matters. (European Commission, Mercosur, 2017)

Gulf Cooperation Council(GCC) is political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman. The GCC was established in Riyadh, Saudi Arabia, in May 1981. The purpose of the GCC is to achieve unity among its members based on their common objectives and their similar political and cultural identities. (GCC, 2017)

2. Data and Methods

The aim of the paper is to evaluate the prerequisites and possibilities for export of Slovak agricultural and food commodities to the third country markets that will be achieved by analyzing the development of foreign agrarian trade of the Slovak Republic in the area of commodity and territorial structure. Submitted paper focuses on the Slovak agricultural and food products in the third country markets as well as on the foreign agrarian trade relations between the Slovak Republic and individual international groups EFTA, CIS, EUROMED, MERCOSUR and GCC. Paper was elaborated by using both secondary and primary sources. In order to achieve the aim of the paper, we used the statistical methods, the analytic-synthetic method, the objective method and the comparative method for comparing the territorial and commodity structure. The statistical data of the foreign agrarian trade necessary for the analysis were obtained from the Statistical Office of the Slovak Republic, Ministry of Agriculture and Rural Development of the SR, the EU database, Eurostat and Ministry of Economy of the Slovak Republic. The foreign trade of the Slovak Republic and its statistics were obtained from the data of the EXTRASTAT and INTRASTAT system. The comparative advantages of SR with agricultural and food products were evaluated by using the revealed comparative advantage index (RCA) (1).

$$RCA = \ln[(x:m)/(X:M)] \quad (1)$$

Where:

x- export of given commodity

m- import of given commodity

X- total agri-food export of the country

M- total agri-food import of the country

A comparative advantage is “revealed” if $RCA > 1$.

If $RCA < 1$, the country is said to have a comparative disadvantage in the commodity.

If $RCA = 0$, the country has neither comparative advantage nor comparative disadvantage.

Competitiveness of the Slovak Republic and its agricultural and food products was compared with the world, the EU and third countries. The classification of the commodity structure of foreign agrarian trade of the Slovak Republic was based on description of Harmonized System (HS), used by the Customs statistics of the Slovak Republic as well as by the SITC Rev. 4 (Standard International Trade Classification, Rev.4).

3. Results and Discussion

Table 1 shows data on the highest imports and exports of food products of Slovak Republic with EFTA group in 2015. Among the most exported products belongs HS 1905 Bread, pastry, cakes, biscuits and other bakers' wares (with export value 5,094 thousand EUR), followed by HS 1806 Chocolate and other food preparations containing cocoa (with export value 4,324

thousandEUR)and HS1702 Other sugars (amounting to 1,768 thousandEUR). From the EFTA group, we have imported the most following: HS0304 Fish fillets and other fish meat (whether or not minced), fresh, chilled or frozen(import volume 3,519 thousandEUR), HS 1806 Chocolate and other food preparations containing cocoa (with import value 3,499 thousandEUR) HS 2101Extracts, essences and concentrates, of coffee, tea or maté (with an import volume of 3,462 thousandEUR).

Table 1: The Largest Import and Export of Agricultural and Food Products between EFTA Group and Slovak Republic in 2015 (in thousand EUR)

HS	EFTA Export	2015	HS	EFTA Import	2015
1905	Bread, pastry, cakes, biscuits and other bakers' wares	5,094	0304	Fish fillets and other fish meat	3,519
1806	Chocolate and other food preparations containing cocoa	4,324	1806	Chocolate and other food preparations containing cocoa	3,499
1702	Other sugars	1,768	2101	Extracts, essences and concentrates, of coffee, tea or maté	3,462
0709	Other vegetables, fresh or chilled	1,633	2202	Waters, including mineral waters and aerated waters, containing added sugar	2,220
2303	Corn starch	1,234	2005	Other vegetables prepared or preserved otherwise than by vinegar or acetic acid	1,913

Source: Statistical Office of the SR, own processing

Table 2 shows data on the highest imports and exports of food products of Slovak Republic with CIS in 2015. Among the most exported products belongs HS 0407Bird's eggs, in shell, fresh, preserved or cooked (export value 11,862thousand EUR), followed by HS 1005 Maize (Corn, with export value 5,270 thousand EUR) and HS 2106, Food preparations not elsewhere specified or included (amounting to 4,957 thousand EUR). From the CIS group, were as the most important food products imported to Slovak Republic following: HS 0802 Other nuts, fresh or dried, whether or not shelled or peeled (import volume 6,728 thousand EUR), HS0409 Natural honey (with import value 2,874thousand EUR) and HS 1512 Sunflower seed, safflower or cotton seed oil and their fractions (import volume of 2,379thousand EUR).

Table 2: The Largest Import and Export of Agricultural and Food Products between CIS and Slovak Republic in 2015 (in thousand EUR)

HS	CIS Export	2015	HS	CIS Import	2015
0407	Bird's eggs, in shell, fresh, preserved or cooked	11,862	0802	Other nuts, fresh or dried, whether or not shelled or peeled	6,728
1005	Maize (Corn)	5,270	0409	Natural honey	2,874

2106	Food preparations not elsewhere specified or included	4,957	1512	Sunflower seed, safflower or cotton seed oil and their fractions	2,379
1107	Malt, whether or not roasted	3,557	2204	Wine of fresh grapes; grape must	1,965
0102	Live bovine animals	2,357	2208	Undenatured ethyl alcohol spirits, liqueurs and other spirituous beverages	1,160

Source: Statistical Office of the SR, own processing

In 2015, Export from Slovak Republic to EUROMED reached volume 23,504 thousand EUR in HS 0102 Live bovine animals followed by HS 1104 Cereal grains otherwise worked export volume 3,153 thousand EUR) and HS 2303 Corn Starch with export volume 2,633 thousand EUR.

As for import from EUROMED to Slovak Republic, the most important were HS 0805 Citrus fruit, fresh or dried with import volume 4,820 thousand EUR followed by HS 0804 Dates, figs, pineapples, avocados, guavas, mangoes, fresh or dried (import volume 3,861 thousand EUR) and HS 0802 Nuts, fresh or dried, whether or not shelled or peeled with import volume 3,468 thousand EUR (Table 3).

Table 3: The Largest Import and Export of Agricultural and Food Products between EUROMED and Slovak Republic in 2015 (in thousand EUR)

HS	EUROMED Export	2015	HS	EUROMED Import	2015
0102	Live bovine animals	23,504	0805	Citrus fruit, fresh or dried	4,820
1104	Cereal grains otherwise worked	3,153	0804	Dates, figs, pineapples, avocados, guavas, mangoes, fresh or dried	3,861
2303	Corn starch	2,633	0802	Nuts, fresh or dried, whether or not shelled or peeled	3,468
2106	Food preparations not elsewhere specified or included	1,527	2008	Fruit, nuts and other edible parts of plants, otherwise prepared or preserved	3,030
1702	Other sugars	1,313	2007	Jams, fruit jellies, marmalades, fruit or nut puree and fruit or nut pastes	2,140

Source: Statistical Office of the SR, own processing

Table 4 shows data on the highest imports and exports of food products of Slovak Republic with MERCOSUR in 2015. Among the most exported products belongs HS 1806 Chocolate and other food preparations containing cocoa (export value 91 thousand EUR), followed by HS 0806 Grapes, fresh or dried (with export value 24 thousand EUR) and HS 1905 Bread, pastry, cakes, biscuits and other bakers' wares (amounting to 23 thousand EUR). From MERCOSUR were to Slovak Republic imported as the most important food products following: HS 0207 Meat, and edible offal, of the poultry of heading (import volume 18,965 thousand EUR), HS 0805 Citrus fruit, fresh or dried (with import value 5,080 thousand EUR) and HS 0201 Meat of bovine animals, fresh and chilled (import volume of 2,956 thousand EUR).

Table 4: The Largest Import and Export of Agricultural and Food Products between MERCOSUR and Slovak Republic in 2015 (in thousand EUR)

HS	MERCOSUR Export	2015	HS	MERCOSUR Import	2015
1806	Chocolate and other food preparations containing cocoa	91	0207	Meat, and edible offal, of the poultry of heading	18,965
0806	Grapes, fresh or dried	24	0805	Citrus fruit, fresh or dried	5,080
1905	Bread, pastry, cakes, biscuits and other bakers' wares	23	0201	Meat of bovine animals, fresh and chilled	2,956
2106	Food preparations not elsewhere specified or included	15	0901	Coffee, whether or not roasted or decaffeinated; coffee husks and skins	2,708
1704	Sugar confectionery (including white chocolate), not containing cocoa	9	1202	Ground-nuts, not roasted or otherwise cooked	2,338

Source: Statistical Office of the SR, own processing

In 2015, Export from Slovak Republic to GCC reached volume 1,604 thousand EUR in HS 1704 Sugar confectionery (including white chocolate), not containing cocoa, followed by HS 2106 Food preparations not elsewhere specified or included (export volume 567 thousand EUR) and HS 1901 Malt extract with export volume 52 thousand EUR. As for import from GCC to Slovak Republic, the most important in 2015 were HS 1301 Lac; Natural Gums, Resins, Gum-resins And Balsams (import volume 720 thousand EUR), HS 2009 Fruit juices (including grape must) and vegetable juices with 7 thousand EUR followed by HS 2403

Other manufactured tobacco and manufactured tobacco substitutes (4 thousand EUR, Table 5).

Table 5: The Largest Import and Export of Agricultural and Food Products between GCC and Slovak Republic in 2015 (in thousand EUR)

HS	GCC Export	2015	HS	GCC Import	2015
1704	Sugar confectionery (including white chocolate), not containing cocoa	1,604	1301	Lac; Natural Gums, Resins, Gum-resins And Balsams	720
2106	Food preparations not elsewhere specified or included	567	2009	Fruit juices (including grape must) and vegetable juices	7
1901	Malt extract	52	2403	Other manufactured tobacco and manufactured tobacco substitutes	4
2007	Jams, fruit jellies, marmalades, fruit or nut puree and fruit or nut pastes	42	0402	Milk and cream, concentrated or containing added sugar or other sweetening matter	0.6
1904	Prepared foods obtained by the swelling or roasting of cereals or cereal products	36	0401	Milk and cream, not concentrated nor containing added sugar or other sweetening	0.5

Source: Statistical Office of the SR, own processing

3.1 Competitiveness of Selected Slovak Agro-food Commodities with Third Country Markets by Revealed Comparative Advantage Index (RCA)

Table 6 gives an overview of the most competitive Slovak agro-food commodities in third country markets according the product class (HS Code) by RCA in 2013-2015. The highest comparative advantage was recorded for HS 1 Live animals, HS 11 Milling products, malt and maize, for which there was an increase within given period and HS 2 Meat and edible offal, which had been declining from 2013 onwards. Other competitive products are HS 10 Cereals and HS 4 Milk, Eggs and Honey.

HS 17 Sugar and confectionery, HS 18 Cocoa and cocoa preparations, HS 19 Baked goods and confectionery were competitive in the given period (RCA has been higher than 1 since 2014) and HS 21 Miscellaneous edible preparations had a tendency in comparative appreciation. HS 22 Beverages, spirits and vinegar showed a significant decrease in comparative advantage.

Table 6: TOP 10 The Most Competitive Slovak Agri-food Commodities in Third Country Markets according product class (HS Codes) by RCA in 2013-2015

HS	Product Class	2013	2014	2015
1	Live animals	5.47	V	5.61
2	Meat and edible offal	5.97	V	3.14
4	Milk, Eggs, Honey	2.12	1.91	2.11
10	Cereals	1.74	2.69	2.65

11	Milling products, malt and maize	2.62	2.68	3.37
17	Sugar and confectionery	0.84	1.16	1.46
18	Cocoa and cocoa preparations	0.92	1.31	1.33
19	Baked goods and confectionery	0.63	1.11	1.32
21	Miscellaneous edible preparations	0.62	0.78	0.93
22	Beverages, spirits and vinegar	0.35	0.18	0.14

Source: EUROSTAT, own processing

4. Conclusion

Trade with third countries represents for Slovak Republic a long-term unfavorable situation where the volume of agricultural and food products is forecasting the volume of exports. Encouraging the export of agri-food commodities to third countries will improve the competitiveness and efficiency of foreign agro-trade. It would be more appropriate to exploit the benefits of the EU's free trade agreements with third countries and to promote bilateral economic co-operation with a special treatment of supply and demand for better market orientation as well as the organization and participation of domestic producers in exhibitions in third country markets. Attention should be also paid to the state protection against the import of agricultural and food products that do not meet EU standards.

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Economic, Social and Environmental Problems in a World of Increasing Globalization

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Abstract

This article reviews the appearance of ecological and social costs of economic development within the globalization process for illustrating their influence on European management especially focusing on ecology. The article concludes that the process of European unification is successful in many areas but also faces a lot of problems and challenges. To the very important ones belong the social inequalities, unemployment and the destruction of nature. Thanks to the development of science and technology the creation of new economical activities in Europe is possible. They can help to create new possibilities for both, the solving of the ecological problems and to create jobs in many sectors of economy. The contemporary management should play a very important role in this process. Europe as one of the first continents which started the dynamic process of industrialization and destroying of nature can also be the first one to unite the contemporary economy with pro-economical activities. This would allow to connect the solving of social and ecological problems.

Key words: globalization, Europe, unemployment, ecology, management, pollution, environment

JEL Classification: P48, P49

1. Introduction

The process of increasing globalization, understood as the development of strong economical, social and communication networks in the world is unique in human history. (Giddens 1993: 547) This process faces many challenges; among them economic, social and environmental problems earn special attention. In order to understand the complexity of this issue, it is reasonable to be aware of the importance of the role of the 'technical revolution' for the contemporary shape of the 'global condition.' During that time, the previously unknown techniques of production based on steam engines started to become widespread.

The combination of the forms of work in manufacturing with steam powered engines gave birth to the process of industrialization. During this period, the main organizations of the capitalist system arose, and the process of concentration of capital and economic power began. At this time, the importance of social inequalities, poverty and unemployment gained relevance. Simultaneously to the industrialization process, took also place the devastation of the Earth's resources in previously unknown scales.

2. Methodology

In the process of gathering dates the documentary research method as well as the comparative historical research method were used.

3. Economic situation

A real threat would seem to be constituted by the concentration of capital that takes place as a result of mergers of banks and industrial enterprises. This changes the distribution of power in the world, providing a rather low numbered group but having great material resources at their

disposal and consequently large influence which can threaten the very fundamentals of democracy. (Sachs 2005: 24 - 25)

The existence of profit- seeking, private 'financial empires', which are controlled by nobody, several times contributes to economic destabilization in many countries – for instance the activity of speculative capital used for speculations. Alarming in this context are especially the often unclear exchange dealings and the increasing role of capital used to achieve rapid profits. 'This new neoliberal economic order received further legitimation with the 1989 – 91 collapse of communism in the Soviet Union and Eastern Europe. Since then, the three most significant developments related to economic globalization have been the internalization of trade and finance, the increasing power of transnational corporations, and the enhanced role of international economic institutions like the IMF, the World Bank, and the WTO.' (Steger 2009: 41-42)

Although contemporary corporations are international oriented, they also exert – due to their economic force – serious influence in their mother countries. American, Japanese or German firms exemplify it. Their internationality manifests itself in the pursuit of increasing their profits through relocating their production into 'cheaper' countries.

Violent protests of anti-globalists often taking the form of spectacular action seem to achieve only limited success. (Dahrendorf w.d.: 241-313) This is in relation to, among other things, the colorful 'origins' of the ideology of the protesters and the general nature of their criticism. Furthermore, the basis of the enemy of the process of globalization appears to be an anachronism. In light of the fact that this process is of a worldwide nature and is the result of a wide range of events taking place in many countries. A more reasonable solution would be in which capitalists who by nature strive towards the maximization of profits, would be forced to adhere to the specified regulations of activities, thanks to which profits can be gained that is also of benefit to the community.

Among the critics of the actual situation of global economy it is possible to find several outstanding researchers of social and economic life – e.g. Noam Chomsky and Jeremy Rifkin. Especially prominent – due to his experience former and contacts to influential circles of economic decision- makers – became the well known American economist Joseph Eugene Stiglitz. Being a critic of the contemporary form of globalization and attacking the orthodox attitude of the 'free market fundamentalists', he simultaneously emphasizes the role of the free market within globalization processes. Stiglitz appraises the actual 'globalization management' negatively, espousing a 'global social contract' founded on more fair trade with Third World countries as well as the access to knowledge and medical care. He emphasizes the necessity to rise the developmental aid to 0.7% of the GNP and the consideration of their cultural specifics. (Stiglitz, 2016: 218-191)

4. Social problems

One of the main problems which is found in almost the whole world, is that of unemployment. Lack of work means the deprivation of the unemployed people of their source of income. This also reduces their self-esteem and self acceptance. Because of its effects on the person's health, the system of unemployment assistance, regardless of its size, will not remove the psychological and social effects of being left without a job. In its essence, unemployment constitutes the driving force of a whole range of economic problems and various forms of social inconformity as in the examples of alcoholism and drug addiction. (Galbraith, 1963: 165) Unemployment can cause social conflicts and revolts – as the example of the 'Arab spring' shows. One also should stress the economical importance of income in terms of demand shaping.

The constant high jobless figures in the western countries causes that the fear of losing work drives the employees to abandon several rights. One of the visible effects of this phenomenon is the employee representations' gradual loss of strength in highly developed nations, especially those organized in great organizational structures. In the Third World Countries the activity of trade unions is often purposely complicated – there where they manage to emerge, they are in general subordinated to the employers.

5. New political tendencies

In recent years the intensification of nationalist and separatist tendencies in different parts of the world is noticeable. The activity of some self-appointed 'leaders of national movement' poisons the public debate, making dialogue and mutual understanding of people difficult. Egoistically-sounding slogans of some politicians, as well as the economic protectionism, challenge the spirit of international cooperation. The election of Donald Trump and the 'British exit' are clear examples of this trend.

It is embarrassing to negate the impact of human activities on the atmosphere. The issue seems to be scientifically settled, and even if some of the arguments of 'greenhouse effect' proponents' theory may be a little exaggerated, one cannot ignore the facts.

6. Environmental problems

Negative ecological phenomena emerged as mentioned above during the industrial revolution.

'Technics does not exist in a vacuum, not does it have an autonomous life of its own. (...) Skills, devices, and raw materials were interlinked in varying degrees with the rational, ethical, and institutional ensemble that underpins a society; insofar as *techné* was concerned, All were regarded as an integrated whole.' (Bookchin, 1981: 223)

During this period, the use of more modern agricultural machinery and fertilizers started, more efficient crops were planted, and farming methods were improved. At the same time improvement techniques developed.

Thanks to these technical innovations, the agricultural economy became much more efficient than before – the use of fertilizers played an important role in this. The urbanization process was connected to a large degree with the development of the big centers of industry. The existence of huge metropolitan areas is, from the ecological point of view, highly problematic.

As a result of these transformations, the so called 'industrial agriculture' developed. This kind of farming is especially dangerous for the environment, consuming large quantities of fertilizers and water. Such farming is also responsible for preferring in agriculture destructive crop monocultures and mass animal breeding. Industrial farming is associated with today's international companies such as the Monsanto, Syngenta and Cargill. (Drucker 1993: 97) Another characteristic of the industrialization was a strong shift from rural work to industrial labor.

Growing industrial production in Europe and America was dominated by textiles and clothing, steel and ship building. Among the main branches of the developing industry were textile, spinning, weaving, metallurgy and mining. Industrialization caused significant damage to the environment. (Bookchin, 1981: 240-266). The time of the industrial revolution was simultaneously a period of the great demographic explosion in Europe, which additionally aggravated the situation.

Serious problems for traditional agriculture have arisen as a result of the spread of genetically modified agricultural products. As India was forced in 1998 by international organizations

related to the World Bank to open up its agricultural sector to big corporations, the farmers in this country faced a serious challenge. The traditional custom of leaving seeds to sow fields was suddenly replaced by corporate seeds which are protected from re-use by genetic manipulation and by patent law. A part of the Indian farmers became indebted through these practices. Some of them, who could not repay their debts, committed suicide.

Mass fattening of animals is connected with their great suffering. Unhealthy substances applied to animals and the bad conditions of their breeding bounce off the health of people who eat their meat. This should also be remembered in the context of the debate on the immunization of human organisms to antibiotics and the risks of antibiotic-resistant diseases.

In the face of great injustice on our planet, one can paraphrase Einstein's famous quotation of 'infinity' saying: 'Only two things are infinite: human stupidity and human greed; and I am not sure about the former'.

7. Pro - ecological economy

The idea of sustainable development took shape in democratic countries and is related to the concept of the welfare state. In most cases, protecting the environment does not play a very important role in the authoritarian states. The principles of ecology have much in common with human rights.

They are inseparable from the notion of the common good. Because of this, democratic government should show more commitment in the area of supporting projects connecting both ecological and social economies. Donald Trump dismantles the environmental policy of his predecessor.

Maybe in this situation the EU countries should take the lead on the climate change debate. (y Gasset, 1950:91-138)

As a reaction of the 'economical rationalization' of human behavior in the economy, a concept of sustainable development emerged, which – even if often abused and exploited – is a sensible ideological base. The 'green movement' tries to change the consciences of the residents and release energy needed to carry out the reforms.

The so called 'pro - ecological economy' is a very important source of new jobs. The activities related to the green economy are not limited only to the area of revenue-generating industry. The varied activities in this field are connected with the benefit of not only the employees, but also their families and local communities. This means the progress of health condition and increasing of human awareness towards ecology – especially in terms of clean production.

In many western countries this type of processing has developed into a prospering business that brings in significant profits – a serious business is for instance the processing of used paper. In some areas of the USA this has yielded millions of dollars – similar activities have been undertaken in the case of processing scrap metal. Likewise, in other areas of environmental protection the possibilities of creating greater numbers of work places associated with environmental protection are increasing – an example of this could be the recultivation of industrial areas, modern management of constant waste, maintaining systems of supplying water and waste water removal, protection of water and sewage systems.

The response to ecological threats associated with intensive urbanization is the so called 'sustainable architecture', which takes into account such aspects of building as heating, ventilation and cooling system efficiency in architectural objects. This kind of architecture plays an increasingly important role. (Kromolowski, 2014: 2124) Sustainable architecture prefers the use of recycled elements as building material.

Because of the ecological degradation of the world, the use of non-renewable fossil sources should be abandoned. There is still a large amount of unused social and economic possibilities that are hidden in 'unconventional' sources of energy – or in other words, its production in hydroelectric, air and solar power plants. These constitute a significant alternative with relation to the traditional methods of power production – mainly atomic and coal powered power plants. The impact of policy on clean energy production is not always positive. Sudden changes of price- and sales- conditions are good examples.

It is necessary to consider the sense of changing the form of agricultural production – perhaps working out a pro-ecological form of agricultural production which would take the form of producing healthy food that does not destroy the natural environment and would provide increased possibilities of employment. We should move away from large breeding farms which produce unhealthy food in a manner that is harmful to the environment. (Bookchin, 1981: 240-266)

Constructive steps on the road to improving the situation in agriculture are hindered by the 'agrarlobby' which benefits from the current situation, which is witnessed not so much in terms of the numbers of citizens employed in agriculture as in terms of the economic and political potential at its disposal. (Pestoff, 1991: 193) Recently, there has been an increase in the significance of eco-tourism, whose services are availed of by an increasing number of health conscious people. Unhealthy living conditions that exist in large city agglomerations encourage people to search for alternatives both in the form of 'healthy' holidays or a few days of rest e.g. on Saturdays and Sundays, while also in the form of changing lifestyles and way of living – evidence of this is shown in the increase of 'green belts' in city areas. The afore-mentioned changes create new jobs and lead to the formation of healthier habits that are safer for the natural environment.

'Third World countries and industrialized countries are confronted with a broad range of environmental problems. Organizations for environmental protection should therefore be given extra support, particularly in the Third World.' (de la Court, 1990: 109) Especially in the Third World countries, capital shortage in the area of ecology is especially noticeable. A good remedy may be cooperative movement and the intensification of the 'fair trade' initiatives. Other possibilities are related to 'mini credits' – a movement (Grameen Bank) founded in 1975 in Bangladesh by Muhammad Yunus.

Simultaneous to the development of the activities related to ecology, the educational aspects of this issue gain importance. (Zieliński 2014: 393-412)

8. Conclusion

Creating jobs that will make the environment cleaner and healthier are not contradictory but they are complementary. To achieve both: the reduction of unemployment, and the creation of a modern and attractive sector of economy, seems to be a very interesting idea.

The so called *pro - ecological economy* can be one of the fundamental pillars of the contemporary economy. It allows us to combine solving economic and social problems. The success of this project means the reduction of political tensions. In order to achieve this goal, humanity should change the way of thinking – giving up selfishness and the economy of 'environmental robbery'.

In this way, humanity would somehow 'return to the roots' – because the beginnings of the economic activity of our species were motivated by the desire to improve the conditions of

existence in harmony with the natural environment. It would go well to recall this idea in the advanced phase of globalization.

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Financial Aspects of Environmental Protection in Mining Enterprises

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Abstract

The main aim of this article is to present and analyse the costs of environmental protection in mining enterprises in Poland in 2006-2014. To achieve such purpose in the methodological part of the article the environmental costs in coal mining were selected and described and additionally an attempt to answer the question 'Is sustainable development in extractive industries possible?' was made. In empirical part of the article the level and structure of environmental costs in Polish coal mining were analysed in the context of total costs and inefficiency problems. In the summary some advice at implementing sustainable development in Polish mining industry was formulated.

Keywords: mining enterprises, environmental costs, sustainable development

JEL Classification: G30, L20, M21

1. Introduction

1.1 Justification of taken considerations and research

Coal mining is one of the traditional industries that has been established and developed in the era of industrialization. Now in many modern economies it is treated as the declining sector causing a lot of problems for environment and local societies. On the other hand, there are still some less developed regions in Africa, Asia or America where extractive industries are the foundation for existence of local and regional communities (Obi, 2010; Kostad & Wiig, 2009; Macintyre, Mee and Solomon, 2008). In these areas the mining enterprises often abuse the environmental, employment and human rights due to lower civilization level of development. According to the above circumstances and some natural conditions such as natural hazards (Brodny & Tutak, 2016; Szlązak, 2013; Mayes, Gozzard, Potter and Jarvis, 2008) and operating on large surface or underground areas, implementing the rules of Sustainable Development (SD) in extractive industries is difficult or even impossible (Hilson, 2012; Slack, 2012; Coumans, 2010; Onkila, 2011; Calvano, 2008; Hilson & Yakovelva, 2007). This fact is confirmed in additional requirements for mining enterprises in Global Reporting Initiatives (GRI) concerning reporting on Corporate Social Responsibility (CSR) (Welker, 2009). Despite the doubts about the possibility of implementing CSR in mining enterprises, it is worth to discuss their influence on environment and society because they are still operating in all continents and their activity is not indifferent to human health and life (Wolniak & Hąbek, 2017; Caputa, 2016; Campbell & Roberts, 2010; Gray, 2010).

The negative influence of mining exploitation has a lot of aspects. One of them – not often analysed – is the financial cost of environmental protection caused by mining enterprises' activity (Mutti, Yakovleva, Diego Vazquez-Brust and Di Marco, 2012). Such study allows estimating how much the societies have to pay for access to natural resources and is it profitable or only necessary? Therefore the main aim of this article is to present and analyse the costs of environmental protection in mining enterprises in Poland in 2006-2014.

To achieve the above aim the article is divided into four parts. The first one is this introduction with some insights from Polish coal mining. The second one includes the description of used methodology. The third concerns results and discussion about costs of supporting extractive industries in a wider perspective. And finally, in the 'Conclusion' section, the limitation of taken studies and the directions of further research are presented.

1.2 Insights from Polish coal mining

Poland is one of the largest producers of hard coal in the world and the largest one in Europe. Additionally, hard coal is the key energy source in Polish energy balance. Therefore it is a crucial industry and important employer in Polish economy, especially in The Upper Silesia Coal Basin. In the nineties of the twentieth century - after economic transition - there were 70 coal mines operating in The Silesia Region. Over the last twenty five years their number was reduced to several, among which a significant part is now consolidated with the energy industry (Nawrocki & Jonek-Kowalska, 2016; Bijańska & Wodarski, 2014; Rydzewska, 2011).

There are a few main reasons of the liquidation of coal mining in Poland. The most important of them is a lack of economic efficiency caused by constantly increasing unit costs, deepened - in the last few years - by a drop of coal prices on the world market (Kowalska-Styczeń & Sznajd-Wejron, 2016; Zieliński, 2013). The loss of price competitiveness has resulted mostly from raising wages forced by trade unions even in the downturn periods. The decarbonisation policy of European Union is also not conducive to the survival of the mining industry. The result is the decreasing demand for coal which limits markets for Polish production (Michalak, 2016).

According to the above, Polish coal mining was subsidized for more than twenty five years and the amount of public support was constantly increasing, until 2010 when UE forbade support for coal mining. Now, the government can finance only the coal mines liquidation (Kožuch & Sienkiewicz-Małyjurek, 2015; Bąk, 2007).

2. Data and Methods

2.1 Environmental cost framework in mining

Social and environmental costs in mining are usually analysed in the context of cost benefit analysis and it is quite a difficult task, especially in the part concerning the benefits that are often of qualitative, not quantitative character and therefore could be only estimated. The additional problem in adequate measuring and quantifying the environmental costs of mining operations is the long horizon of analysis and the lack of appropriate internal and external statistics. As a result, the known models of costs analysis are general and mostly theoretical ones.

One of the more complex and detailed model of assessing the social and environmental costs in extractive industries was proposed by Lechner et al. (Lechner et al, 2017) but – according to the authors - it also required deepened practical research and case studies. The researchers emphasise that assessment of coal mining consequences for environment has to be conducted by integrated models and has to be supported by experts from different disciplines. As the typical methods used in the particular analysis of the impact of mining on environment that could be integrated in holistic approach they indicate: catchment-scale metrics (Clapcott et al, 2016); spatial multi-criteria decision making approach (Chen et al., 2015); process mapping (Lindberg et al., 2011; Resongles et al., 2014); spatial prioritization tools and scenario analyses (Saenz et al., 2013).

The research presented in this article is preliminary and they concern only the level of environmental costs and the scale of damages caused by coal mining operation in Poland. In the context of Lechner's model they concern only the following aspects: CO₂ emissions, ecosystem condition, dust and acid mine drainage and only in these parts they develop it in practice. In the future it should be deepened, extended and compared with case studies and statistics from other mining regions.

2.2 Environmental costs in coal mining – structure and evidence

In the case of coal mining we should look at environmental costs in the context of the coal mine lifecycle because cost burden changes in the particular stages and exceeds beyond the horizon of the existence of a coal mine. Usually in the lifecycle, a coal mine has to pay the environmental fee which depends on the level and scale of environment pollution. Generally, extractive industries have negative impact on the entire ecosystem, so the range of different financial consequences is wide and varied. Firstly, the coal mining pollutes air by dust and gas emissions, including greenhouse gases. Moreover, hydrosystem is influenced by the discharge of salty mine water containing chloride and sulphate ions. Additionally, coal mines produce a lot of extractive wastes and rock masses requiring proper storage and management. All mentioned processes cause financial costs which increase the total and unit costs of mining production.

Besides common environmental fees - paid during the coal mine lifecycle – the industry has to take into account the reclamation costs and the costs of removal of mining damages during the exploitation processes and after closing the coal mine. In practise, these costs are often subsidized by local or regional governments or refunded from environmental projects or foundations which helps to mitigate the negative consequences of mining exploitation but it is possible and observed only in highly developed countries with good economic conditions. In less developed regions these environmental problems often remain unsolved and result in degradation of the ecosystem.

2.3 Analysis of environmental costs in Polish coal mining in 2006-2014

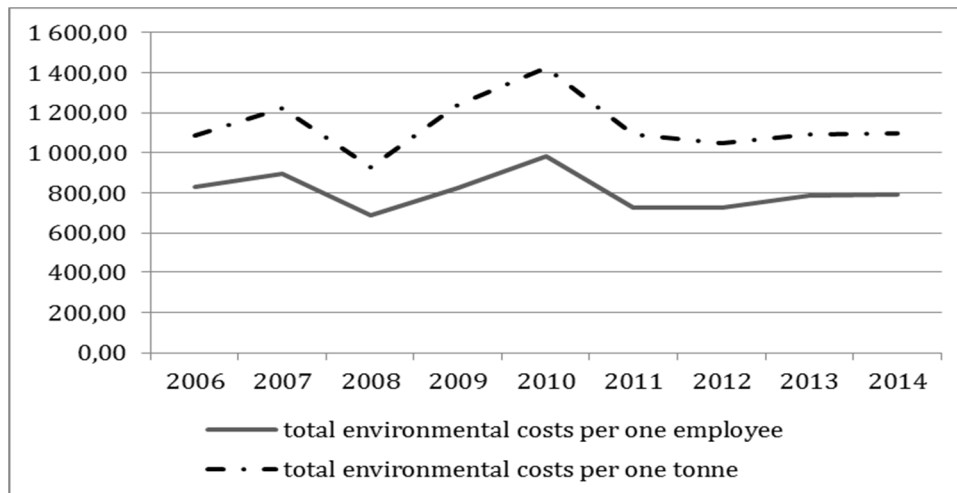
The analysis of environmental costs in Polish coal mining was taken in the years 2006-2015. At the beginning the total environmental costs were analysed in relative and absolute approach. Then the structure of these costs was discussed. Besides financial data, the level of pollutions and damages was presented including:

- the discharge of salty mine water containing chloride and sulphate ions,
- the extractive wastes and rock masses,
- the dust emission,
- the gas emission.

3. Results and Discussion

The main results and indices for environmental costs in Polish coal mining are presented in Figure 1 and 2.

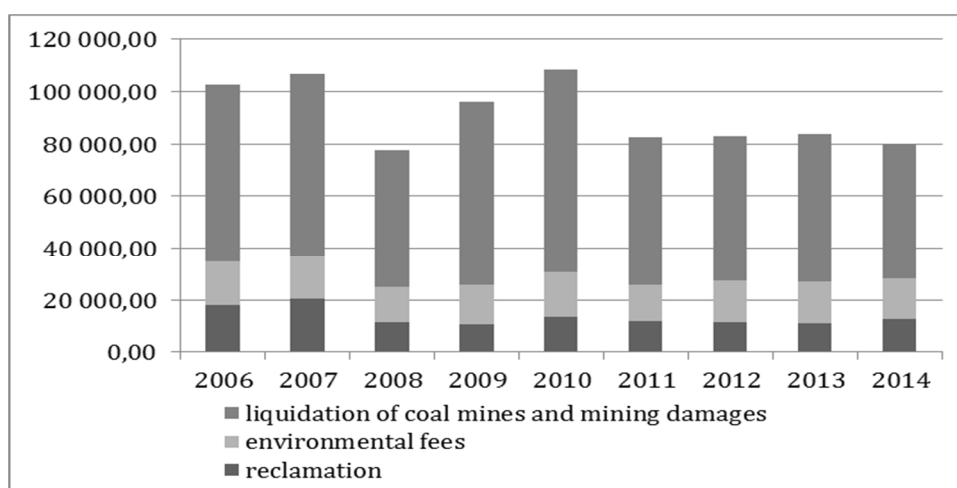
Figure 1: Total environmental costs in relative approach (per one employee and per one tonne) in 2006-2014 [in EUR]



Source: own work based on the data of Ministry of Energy

Throughout the analysed period the total environmental costs in Polish coal mining are above EUR 600 per one employee and above EUR 900 per one tonne. Relative and absolute costs are the highest in 2010 which is connected with the highest costs of liquidation of coal mines and mining damages in this year. Total environmental costs ranged from EUR 77 million to EUR 102 million. A significant part of these costs are the costs of liquidation of coal mines and mining damages. The share of environmental fees and reclamation costs in total costs is similar and ranges from 15% to 19%. In 2010-2014 due to shrinkage of the industry and reduction of excavation the total environmental costs significantly decreased and they oscillated around EUR 80 million. The cost reduction is the highest in the reclamation costs which is connected with the progress of development of post-mining areas and reduced growth in new areas requiring renewal.

Figure 2: Structure of environmental costs in Polish coal mining in 2006-2014 [in thousands of EUR]



Source: own work based on the data of Ministry of Energy

In spite of limiting the environmental costs, the level of pollutions caused by coal mining industry in Poland did not reduce significantly (Table 1). There were some decreasing tendencies but they did not reflect changes in the extraction level and coal mines liquidation

because of the mentioned long-term influence of this sector on the environment. And so, the extraction level in the analysed period decreased by 23% and the extractive wastes and rock masses increased by 3% while the dust emission decreased by 9%. Other selected pollutions decreased but the change was less than the reduction of extraction and amounted to 20% in the case of discharge of salty mine water containing chloride and sulphate ions and 21% in the case of gas emission. This data shows that pollutions connected with the coal mines' operations were and will be in the future a huge challenge for managers of mining enterprises and local and regional governments.

Table 1: Level of pollutions and damages in Polish coal mining in 2006-2014 [in thousands of tonnes]

Specification	Years								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
the discharge of salty mine water containing chloride and sulphate ions	1 525,9	1 452,5	1 294,4	1 387,3	1 479,2	1 324,1	1 377,2	1 260,3	1 226,7
the extractive wastes and rock masses	35 870	36 617	32 476	30 620	33 270	32 984	34 154	35 138	37 111
the dust emission	1,1	0,9	0,9	0,7	0,7	0,7	0,8	1,1	1,2
the gas emission	1 094,4	1 028,4	980,0	991,3	964,9	890,4	884,2	908,0	869,3

Source: own work based on the data of Ministry of Energy

In current conditions of Polish mining enterprises – characterized by lack or low efficiency and loss of financial liquidity – the main problem is financing which has to be sufficient not only for operating and investment activities, but also for present and future covering of the environmental costs. It will be probably an additional burden for local, regional and domestic budgets, especially in a case of coal mining liquidation which can be financed from public funds.

4. Conclusion

According to the above analysis and conclusions it is worth asking if it is necessary to support and develop coal mining in Poland. Well, there are two main reasons justifying the existence of this industry. The first one is the energy safety of Polish economy which is based on hard coal. The second one is the maintenance of jobs in the Upper Silesia Region. So, in this case the general economic and social priorities are more important than the individual economic aims and the environmental protection. It was not estimated in the article but it should be said that nowadays coal mining industry employs about one hundred thousand habitants of the Silesia Region and hard coal is crucial for Polish energy balance with a dominant share in it.

In the described conditions the sustainable development in Polish coal mining now is not possible, but what is interesting, the main reason of it is not the unbalance of social and environmental priorities (in spite of large scale of the environmental consequences of coal mining operations, they are legally and financially secured) - as usually in the world context - but disregarding the individual economic aims, such as efficiency, effectiveness and financial liquidity. In those circumstances the most important task for Polish coal mining is to improve financial results by the unit cost reduction. This will allow maintaining jobs and financing environmental costs in consultation with and for local societies.

Implementing SD in coal mining industry is a difficult challenge, but in the author's opinion it is possible. Successful implementation requires the identification and characterizing patterns of unbalance of priorities in coal mining industries in the world. The next step is to prepare some individual schemes of SD implementation for each pattern.

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The Development Trends in the Agricultural Sector after Accession of Slovak Republic to the EU

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Abstract

The main objective of this scientific paper is to present development trends in the agricultural sector after the accession of Slovak Republic to the European Union. The results are based on database of the Slovak Statistical Office. The time horizon involves the years 2000-2015. The indicators that reflect the state and development in the sector are related first of all to the share of agriculture on GDP, the share of agri-food sector on Slovak foreign trade, the economic results in agricultural farms and enterprises, acreage of utilized agricultural area, gross agricultural production, the share of food, beverage and tobacco on consumers spending, to the development of price indexes in the vertical food chain including of production and consumption. Furthermore, the analysis is carried out in relation to the number of agricultural enterprises, their division according to legal forms. Specific attention is dedicated to the employment, age and educational structure of employees. The achieved results are confirming that the EU accession had the positive impact on the development of foreign trade, on the growth of a crop production, as well as on the farm profitability. However, less favorable was the development in the animal production in which had been noted significant production declines.

Keywords: European Union, agriculture, trends, development, impact

JEL Classification: F630

1. Introduction

After more as one decade from accession of Slovak Republic to the European Union (EU), the state of the Slovak agrifood sector is less developed as it was hoped. Present Slovak agriculture is characteristic with decline of its economic importance, the agricultural production declined as well, there is the growth of foreign trade deficit with agricultural commodities, significant decline of employees number alongside of the whole food chain, and surprisingly high decline of agricultural land area, due to that this is used for other than agricultural purposes. There is also non-favorable development of demography with regard of aging and this is valid not only for rural population, but in general. Having in mind the necessity of the enhanced agricultural performance and the real utilization of agricultural potential, is important to harmonise unbalanced proportions among economic indicators and to create favorable environment for balanced development. 4 years prior Slovak accession to the EU, Bielík and Gurčík (2000) wrote, that high share of agricultural entities is lagging behind of its productional performance in comparison with period prior the transition. Despite of this, Slovak agriculture has the good prerequisites for successful development. According of Šikula et al. (2003), in the pre-accession period, among the strong sides of agriculture belonged the diversity of natural resources which supports the multifunctional agriculture, high educational standard of working forces and relatively high food quality, competitiveness of the crop production sector, good pre-conditions on the organic agriculture, diversity of regional and local production, good conditions for rural tourism and the utilisation of their non-agricultural activities in frame of rural landscape. The weaknesses of this sector, relate to the lower pressure on the competitiveness, to low

profitability and to high production costs, first of all in animal production, limited innovations in production, negative impact of climate changes, credit accessibility, absence of functional food chain and effective procurement-selling inputs and outputs. Moreover, after the EU accession, the agrarian sector was significantly influenced by multinational organizations in frame of CAP (Ciaian, Pokrivčák and Bartová (2005)). According to Serenčes (2010), agriculture is continuing to be the important sector of national economy, which provides basic services in favor of public interests by safeguarding the natural resources and the culture of the countryside, which is the basic condition for all human activities. Bielik (2001), states that the microeconomic determinants of companies' success are fully dependent on the competencies of agricultural managers. Šajbidorová, Lušňáková, Dobišová (2016), claim that important is continuing growth of added value, investments into the human resources, research and development, the high quality educational system, eco-innovations and the active employment policies.

2. Methodology

The submitted scientific article deals with evaluation of the development of agricultural sector, starting with pre-accession period and continuing by the development after the EU accession and ending with year 2015. The secondary information and data used in this article, have been obtained from the Green reports of the Ministry of Agriculture and Rural development in frame of the years 2001-2016. Furthermore, the information and data were achieved from the final reports of the research tasks of the Research Institute for Agricultural Economic and Food Production in Bratislava, as well as the relevant data have been obtained from the Statistical Office of Slovak Republic. The data were further processed by the statistical methods by creating the time lines and calculating the growth indexes. The elaboration of the data was carried out by the support of table processor MS EXCEL 2016 for the primary elaboration, organization, data adjustment, the creation of graphic outputs and tables.

The Development Trends in Agricultural Sector

Agriculture in Slovak Republic was till 1990 consolidated sector. It provided the employment for 17 % of citizens. Thank to the subsidy policies, the foodstuff was cheap and more as 95 % of them were produced in Slovakia. The share of agriculture on GDP was in 1989 the 10,7 %. The main changes in agricultural sector have been launched in 1990. The Federal Government of former Czechoslovak Republic accepted the decree no. 689/1990 about economic reform of agriculture and food processing industry. The substance of this decree was the price liberalization and subsidies restriction in this sector. In 1993, in the first wave of agrarian reform, the 40 % of employees were separated from sector (more as 140 thous. persons), from the total number of people, employed in this sector. The declining tendency of the employees, both in agriculture and food industry is persisting up to date. In 2015, the share of agriculture on the GDP dropped on the level of 2,9 %. From the data analysis from 2001 to 2015, we can state that the most harmful for agriculture were financial and global economic crises (2008-2010). During these years the GDP was even on the level 2,50 %. (Table 1).

Table 1: The Share of Agriculture on GDP in Slovak Republic (in%)

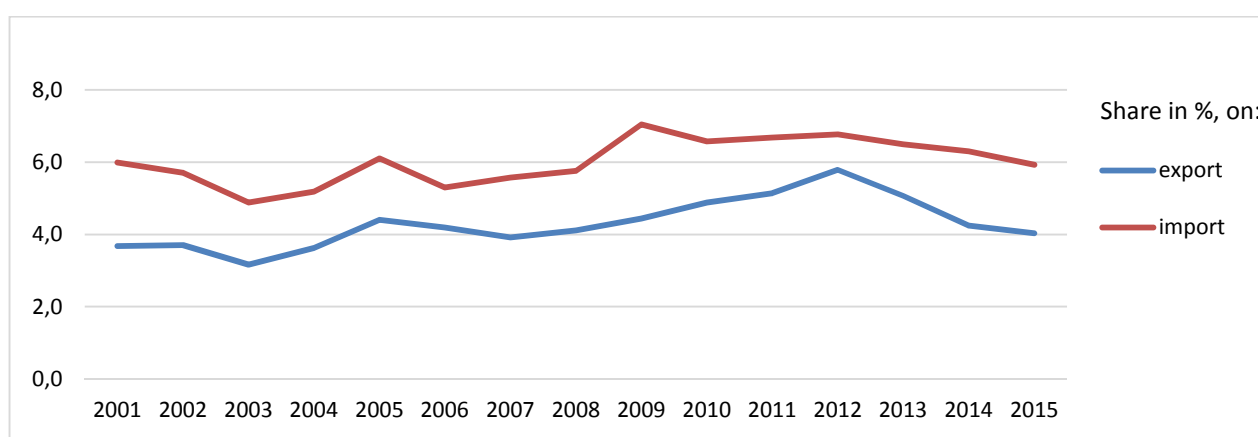
															Difference 2015- 2001
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
3,69	3,76	4,00	4,70	4,70	3,23	3,60	2,80	3,10	2,50	3,10	3,30	2,70	3,00	2,9	-0,79

Source: Information Letters of MOAARD from period 2001-2016, own elaboration

The Development of Agricultural and Food Processing Sectors' Share on the Foreign Trade of Slovak Republic

The share of agrifood sector on the foreign trade of Slovak Republic after its accession to the EU, has been immediately improved due to the free movement of goods. However, import of agricommodities was during the complete period higher as the export. The reason is stemming from the fact that the domestic final production declined and the share of semi-processed or row products was increased in the agrifood export. In more effective way have to be utilized legislative tools on the market support, also more attention should be given to the policy which will more effectively support export of Slovak agrifood commodities and to provide such agrifood policy which will lead to the higher competitiveness of Slovak products. (figure.1).

Figure1: The Development of the Foreign Agrifood Trade on the Total Foreign Trade of Slovak Republic



Source: Information letters of MOARD for the period 2001-2016, own elaboration

In 2003, the one year prior our EU accession, the agriculture was in the deficit of 78,9 mil. Euros. In next year 2004, the economic results had been significantly improved. However, on the improvement of the economic results had only limited share the animal production. Other factors, especially more rapid increase of realization prices of agricultural commodities, global economic and financial crises, input prices, and the flood's negative impacts during 2009, were responsible for economic losses (-112,8 mil. Euros). These negative results were also caused by the existing unbalanced support system among various EU member states. After overcoming majority of the above mentioned barriers, agricultural production achieved in 2015 positive economic results 30, 5 mil. Euros. In comparison with 2014, the economic results declined about 30, 2 mil. Euros. According of the volatile development of this indicator we can state that sector is very fragile and sensitive on the number of changes in its external environment. Despite of the all volatility effects, the official data confirm that in the period 2015-2001 the profit in agricultural entities was increased about 82,6 % (Tab.2).

Table 2: Development of Economic Results in the Sector in mil. Euros

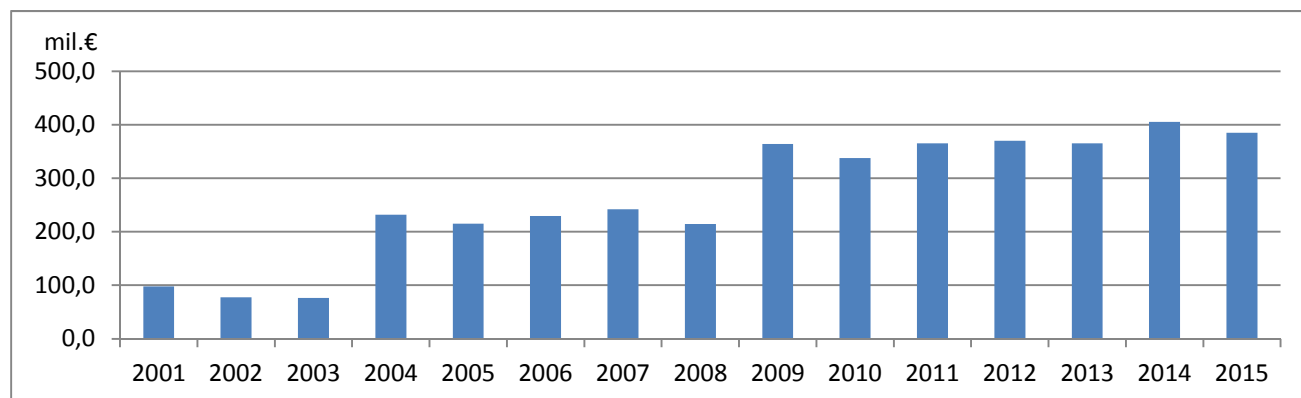
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Difference 2015- 2001	Index 2015/2001
16,7	15,8	-78,9	52,2	-9,9	43,5	10,4	54,7	-112,8	13,9	73,6	35,0	-2,5	65,7	30,5	13,8	182,6

Source: Informative Letters of MOARD SR for the period 2001-2016, own elaboration.

In frame of V-4, the lowest support policy had Slovak Republic on the one hectare of agricultural land (2001). From this point of view, the significant change happened for Slovak

farmers in 2004, when due to EU accession, the support of the sector was positively changed. The support structure was changed by the increased direct payments, despite that in comparison with EU-15 farmers, these payments represented only 25 %. In this regard significant upgrading happened also in 2009. Direct payments became financial stability pillar for agricultural enterprises, despite that Slovak farmers are aware that so far, they are undervalued in comparison with their colleagues from EU-15. This is obviously affecting the lower competitiveness of our farmers. In comparison with the starting year of our observation, the direct payments had been enhanced about 286,9 mil. Eur (figure 2), (index 2015/2001 = 392,5).

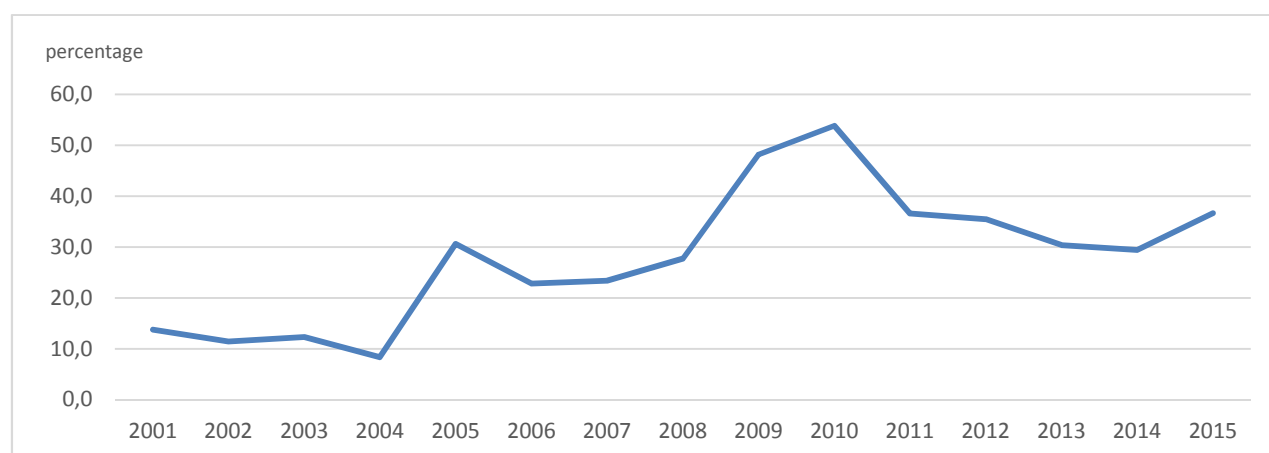
Figure 2: The Development of Direct Payments from 2001 to 2015



Source: Information Letters of MOARD SR for the period 2001-2016, own elaboration

The direct payments together with other supportive tools are participating in very meaningful way on the total income of entrepreneurial units in agriculture. The share of total support on the income from the year 2001 was increased from the share 13,8 % on 36,7 % in 2015. The biggest impact of supports was noted in the years of global and financial crises (2008 to 2010), after this until 2014 the share of direct payments and other supports had the declining tendency and in 2015 was registered growth, due to the additional payments from the Programme of Rural Development 2007–2013, as well as from the new Programme of Rural Development 2014–2020 (figure 3).

Figure 3: The Share of Supports on the Farms' Incomes in the Period 2001-2015



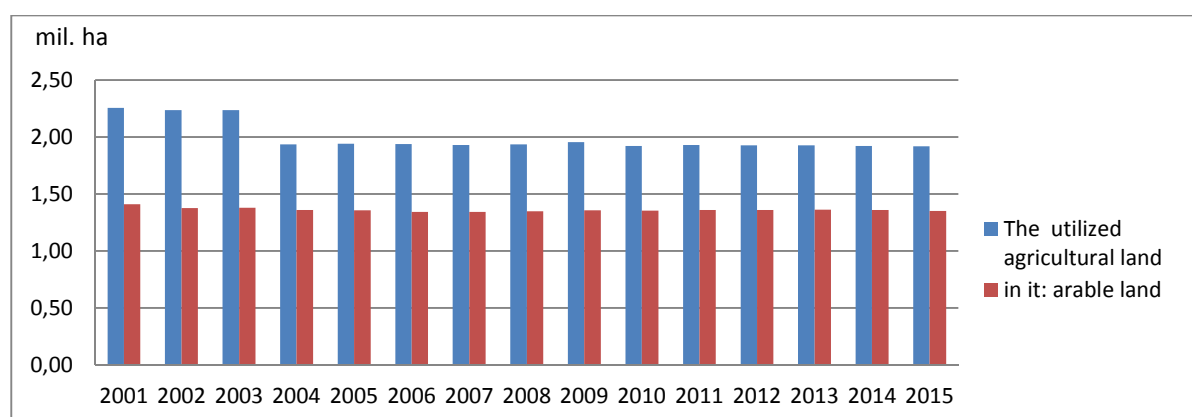
Source: Information Letters MOARD SR for the period 2001-2016, own elaboration

The Development in the Use of Agricultural Land

Soil is representing the most substantial natural and production tool and entrepreneurial resource in agriculture. Today, in some states it is also the mean for political fightings. Even

during our pre-accession negotiations with EU, it was accepted the exception, that if the foreign businessmen would like to buy the Slovak land, then they have to meet certain preconditions. This exception was valid until 2014. Despite of this, according of the MOARD SR's data, approximately 135 000 hectares of land, are in the hands of foreign businessmen. In 2004, the acreage of agricultural and in Slovak Republic was 1 934 659 hectares. However, this indicator is continuously decreasing during the analyzed period. In comparison with the beginning of the evaluated period the decline was noted about 333 thous. hectares (index 85,2) of the utilized agricultural land and about 59 thous. hectares of arable land (index 95,8, or 4,2 %). In Slovak Republic, on daily basis from 2004 is less agricultural land about 2, 33 hectares (figure 4). These declining tendencies are caused by the decreasing of the acreages of the meadows and pastures, but there is also significant problem that agricultural land is more and more used on the construction of industrial entities, on the highways etc.

Figure 4: The Acreage of Agricultural and Arable Land from 2001 to 2015



Source: Informative Letters of MOARD for the period 2001-2016, own elaboration

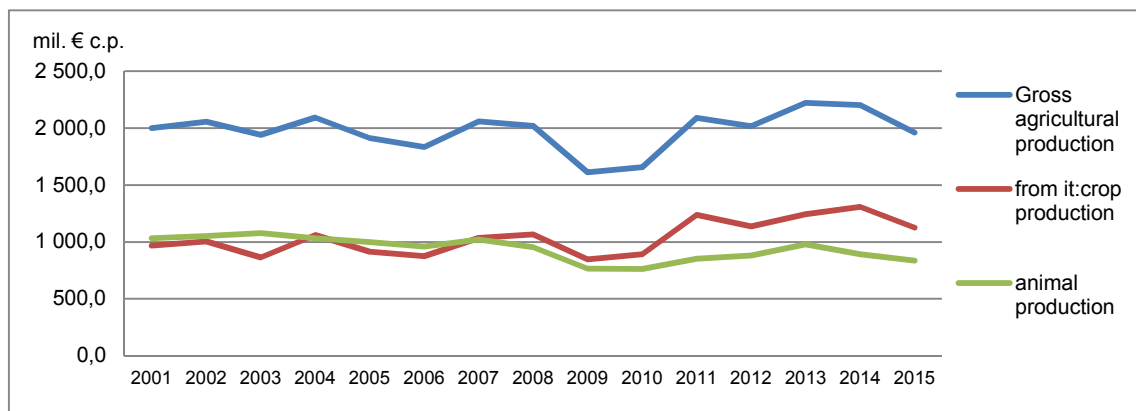
The great challenge is that the land market is too slow due to unarranged property issues towards the land. More as 360 thous. hectares of land belong to the so called unidentified owners. The price of agricultural land in Slovak Republic is below the level of the EU-15. The other great challenge is the farming on the rented land. This reality represents, in comparison with the period prior the social and political changes, the new factor, even complication. This is due to that it is limiting the opportunities of the people who have interest to do the business on the land. This is valid first of all for young farmers.

The Development Trends with Regard of the Gross Agricultural Production

The year 2001 was for the Slovak agribusinessmen exceptional owing to the great drought which was in previous year. This situation required number of measures in the year of crisis, but also to provide targeted support from the so called compensation sources in 2001. The overall farmers support was in this way significantly increased. This growth continued up to 2008-2009 period, when due to the financial and global economic crises, as well as the decline of prices for farming outputs, the Gross Agricultural Value (GAV) once more very sharply declined. This indicator moderately increased in 2010, due to the crop production and this trend is continuing up to date, despite of the volatile prices of agricultural commodities. With regard of the production structure, is prevailing during the evaluated period the crop production (56,5 %) beyond the animal production (43, 5 %). The decline of animal commodities in the human nutrition, as well as the increased import of products of animal production from the other states, after our accession to the EU, sharpened the decline of animal production total volume. According of Statistical Office of Slovak Republic from the year 2015, the gross agricultural

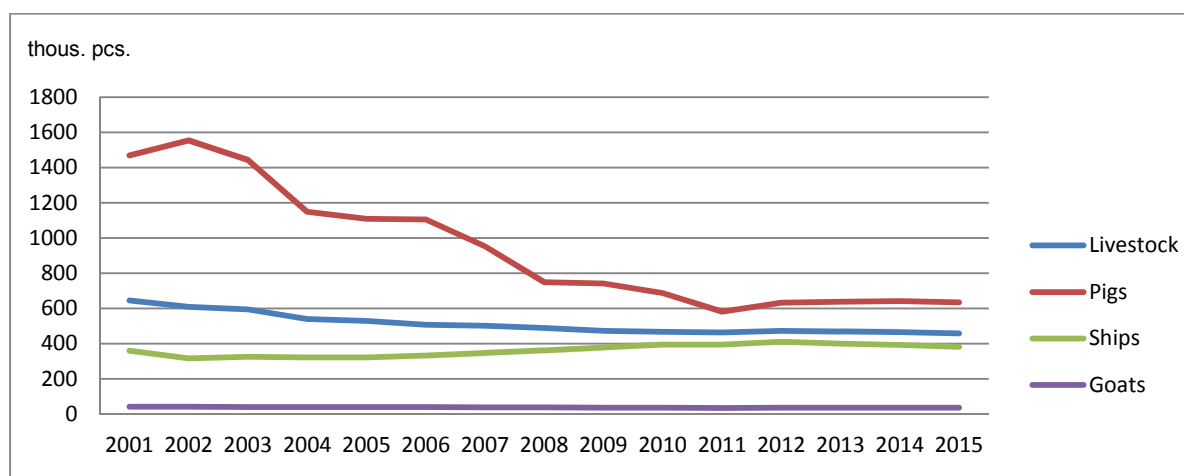
production (GAP) in the current prices declined about 11,0 %, owing to the decline of crop production about 14,1 %, and in animal production about 6,5 %. The Index for the period 2015/2001 expressing the decline of total agricultural production about 2 %, the growth of crop production about 16, 1 %,and the decline of animal production about 19, 1% (figure 5).

Figure 5: The Development of Agricultural Production in the Period 2001-2015



Source: Information Letters of MOARD SR for the years 2001-2016, own elaboration

Stemming from the above results, the conclusion is that accession to the EU caused the moderate decline of GAP, however, there is noted significant increase of crop production, while in the animal production was registered significant, even dramatic decline. From the figure 7 is obvious that the number of farm animals from 2001 noted continuous declining trends. Particularly, after our accession to the EU, the animal production was dramatically weakened. Despite of the EU and domestic supportive policies towards of agriculture, it was almost impossible to stabilize the number of the livestock. This was caused by the low competitiveness of farmers, who were not in the position to sustain the pressures from the side of foreign importers, also to the very low output prices of the meat, especially the milk. In meaningful way, were declined in the last year the number of pigs due to low prices. Even in the last evaluated year, the numbers of the all farm animals were downsized. In the years 2001-2015 the most significant declines have been noted in the pig production, even about 56,9 %. These changes, in the structure of agricultural production had serious impacts on the organizational, economic and productional-structural aspects, but also on the decreasing trends for their agricultural employment in the agricultural entities.

Figure 6: The Development of Farm Animals Numbers in the period from 2001-2015

Source: Information Letters of MOARD SR for period of 2001-2016, own elaboration

The Development of the Consumption Expenditure's Share of Citizenship on the Food, Beverages and Tobacco

The share of the citizenship's expenditures on the food, beverages and tobacco from 2001 to 2004 had the declining trend. This was caused by the more swift growth of the expenditures than the incomes. The lower consumption of some kind of food is linked to the higher prices and also to the increased VAT, as well as is related to the low income of population. The share of food, beverages and tobacco in conditions of Slovak Republic is stagnating. This should be considered as undesirable development tendency. In the EU-28 average this indicator achieves 16.4 %, while in Slovak Republic it is even 28, 04 %, what represents indeed high share on the total expenditures, (table 3).

Table 3: The Share of Food, Beverages and Tobacco on the Consumption Expenditures (in %)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Food Chain and food and no-alcoholic beverages	26,67	26,48	25,76	25,96	26,3	24,8	24,3	24,6	24,2	24,8	24,39	24,8	25,65	25,59
Alcoholic beverages and tobacco	3,12	3,1	3,02	3,09	3	2,9	2,9	2,8	3	3,4	3,25	3,24	3,29	3,49
Food, beverages and tobacco	29,8	29,58	28,78	29,06	29,3	27,7	27,3	27,4	27,2	28,2	27,64	28,11	28,94	29,08

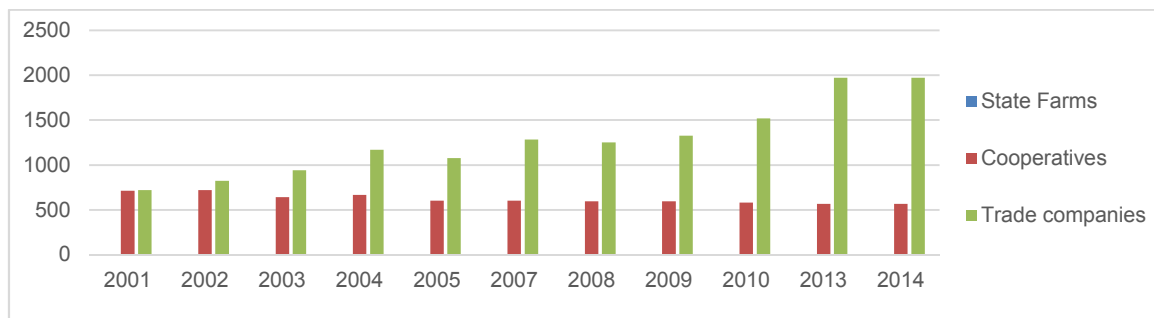
Source: Information Letters of MOARD SR for the years 2001-2016, own elaboration

The Development of Agricultural Entities' Number and their Legal Forms

The agricultural business environment was in the last 25 years affected by the social and political development, legislation, and the EU Common Agricultural Policy. The development of business structure in this sector was differentiated according of diverse entrepreneurial conditions and the various demands. In 2004, after Slovak's accession to the EU, the number of business entities had been increased. Recently, the agricultural cooperatives are in the defence and they are replaced by the trade companies in very significant way. The number in the case of

agricultural cooperatives the same number of cooperatives dropped about 79.3 (figure 7). Despite of this fact, the cooperative farms have the prevailing position with regard of the cultivated area. Up to date they are providing the farming on the area of 36.8 % of total agricultural land.

Figure 7: The Development of Agricultural Entities' Numbers According of the Legal Forms

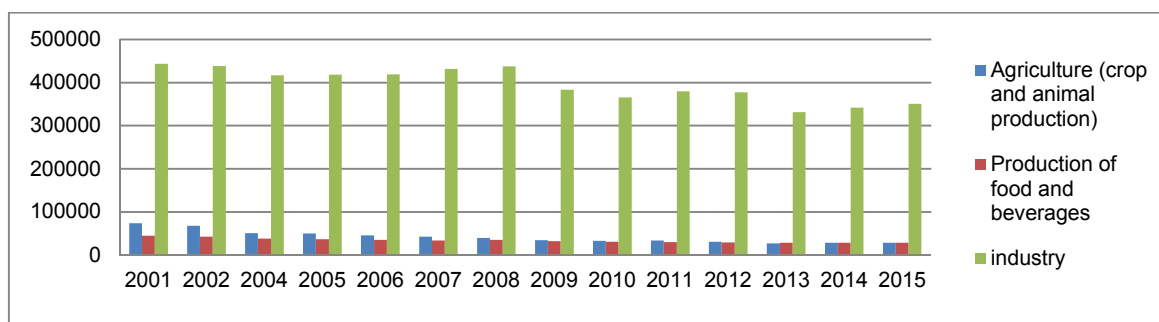


Source: Informative Letters of MOARD SR for the period from 2001-2016, own elaboration

The Employment and Qualification of Agricultural Employees

In 2001 had been working in agriculture 106,4 thous. People. This number was relatively stable up to the time of global economic and financial crises. In 2010, despite of accepted measures on the employment support, the stabilization programme of agricultural employment has failed. The main reason stems from the low salary, which is below the average level of the national economy. The interest about the work and entrepreneurship in agriculture is so far on low level. In 2014, the long-lasting decline of agricultural employees was stopped. This was caused by the production diversification, finalization of production and the income's growth from the additional non-agricultural activities, first of all from agrotourism. By this, more new job opportunities have been created. However, in 2015 was noted further decline of employment (57,9 thous. employees). In all, we can conclude that number of working forces in agriculture between years 2001 and 2015 was downsized on the 48,5 thous. people (figure 8).

Figure 8: The Development of Agricultural Employees in the Selected Sectors



Source: Information Letters of MOARD in SR from the year 2001-2016, own elaboration

Agriculture is very sensitive on the negative weather volatility. This fact forces the agribusinessmen to the more advanced forms of employment. Actually, this is about the flexible release and employment of working forces according of the production structure and the seasonal nature of production. In any case this reality is increasing the requirements on the organizational capabilities and managerial competencies of the agribusinessmen.

With regard of the pertaining low interest about the work in agriculture, is agricultural population aging, the number of the oldest generation is increasing (60-64 rokov). In 2015 it was 6,6 %. In the age up to 44 years in the sector works only 34.7 % people, while beyond of

this age category (45 years) are employed the rest 65.3 %. This situation is not sustainable anymore. On behalf of the generation exchange, it is important immediately accept, so from the EU side, as well from the Slovak Republic Government, in order to accept effective solutions, so to make from agriculture more attractive sector for the younger age categories. The changes in the employees structure from the qualification point of view in positive way affected the enhancement of the university educated employees, even about 4,8 % more (in total about 9,2 %). It was also increased the share of employees with secondary technical education about 6 %, declined the share of employees with primary education from 16 % in 2001 on the 8.3 % in 2015. The underestimation of the functions and missions of the vocational schools was launched by the reform of public sector in 2001, and this reform caused the decline of vocationally prepared people from 56.7 % in 2001 on 54.3 % in 2015.

3. Conclusion

The importance of the agricultural sector was significantly declined and it is not belonging anymore among the priorities of governments, despite of some political declarations. Reasonably was decreased the share of agricultural sector on the GDP. The same is valid about the decline of the number of people employed in this sector. After the EU accession of Slovak Republic, it was declined the overall agricultural production. More dramatic was development in the animal production which performance dropped about 19.1 %. From 2006 was sector significantly affected by the volatile prices. This brought the great pressure on the agribusinessmen, who started with diversification of their production and also with rationalization measures. The cooperative farms are slowly replaced by the other legal forms of companies, as the limited companies, shareholder companies, but also by the individual farming. This is caused by the ideological distrust of society towards of the previous forms of farming. The all analyzed other factors had the significant impact on the management performances of agricultural entities. Managers are also under the pressure to adopt themselves on the changed conditions and to the new management tools.

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Trends in the Development of the Organic Farming in European Union Countries

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Abstract

The main objective of this paper is to introduce and analyse the tendencies in organic farming in European Union countries. The EU recognises the benefits offered by organic farming, both to consumers and to the environment. The Common Agricultural Policy considers organic farming as an important element to the development of the European agricultural systems. The databases for the research are obtained from the Eurostat and from the Green Report of the Slovak Republic. The number of organic producers in Slovak Republic is lower in comparison with other European Union countries. It is essential for strengthening the links between farmers and consumers. Organic farms are often leaders in the sector's entrepreneurship networks setting new frontiers in the dynamics of agricultural development. Organic products also represent a growing share in the EU food market.

Keywords: agricultural land, consumers, environment, organic farming, producers.

JEL Classification: Q010

1. Introduction

Organic farming is an alternative agricultural system which originated early in the 20th century in reaction to rapidly changing farming practices. Organic agriculture continues to be developed by various organic agriculture organizations today. It relies on fertilizers of organic origin such as compost, manure, green manure, as well as on bone meal, and places emphasis on techniques such as crop rotation and companion planting. Biological pest control, mixed cropping and the fostering of insect predators are encouraged. In general, organic standards are designed to allow the use of naturally occurring substances while prohibiting or strictly limiting synthetic substances.

Propagators of Organic Farming have argued that organic agriculture has emphasized closed nutrient cycles, biodiversity, and effective soil management, which can reduce and even reverse the effects of climate change (Meleca, 2008) and that organic agriculture can decrease fossil fuel emissions (Rodale Institute, 2014). The carbon sequestration efficiency of organic systems in temperate climates is almost double (575-700 kg carbon per hectare per year - 510-625 lb / ac / year) that of conventional treatment of soils, mainly due to the use of grass clovers for Feed and crops in organic rotation (UNEP, 2011).

In 2007 the United Nations Food and Agriculture Organization (FAO) said that organic agriculture often leads to higher prices and hence a better income for farmers, so it should be promoted. However, FAO stressed that by organic farming one could not feed the current mankind, even less the bigger future population. Both data and models showed then that organic farming was far from sufficient. Therefore, chemical fertilizers were needed to avoid hunger (FAO, 2007). Other analysis by many agribusiness executives, agricultural and ecological scientists, and international agriculture experts revealed the opinion that organic farming would

not only increase the world's food supply, but might be the only way to eradicate hunger (Brian, 2014).

The EU recognizes the benefits offered by organic farming, both to consumers and to the environment. The Common Agricultural Policy considers organic farming an important element to the development of the European agricultural systems. It is essential for strengthening the links between farmers and consumers. Organic farms are often leaders in the sector's entrepreneurship networks setting new frontiers in the dynamics of agricultural development. Organic products also represent a growing share in the EU food market.

In 2014, an "Action Plan for the future of Organic Production in the European Union" was launched by the European Commission. The plan has three major lines of action: the development of the European organic sector (new EU instruments, developing research and innovation, and also targeting consumer awareness); ensuring consumer confidence in the organic products (more research and innovation to overcome challenges in organic rules); reinforce the external dimension of EU organic production. (Eurostat, 2015).

2. Data and Methods

The main objective of this paper is to introduce and analyse the tendencies in organic farming in European Union countries with special emphasis on Slovak Republic.

The data was gathered from own authors' research and other secondary data taken from FAO, European Commission, Eurostat and OECD. These databases are focused mainly on the share of total organic area in EU-28, crop types cultivated on organic land, types of organic livestock, number and share of organic producers in EU-28 and manufacture of organic products.

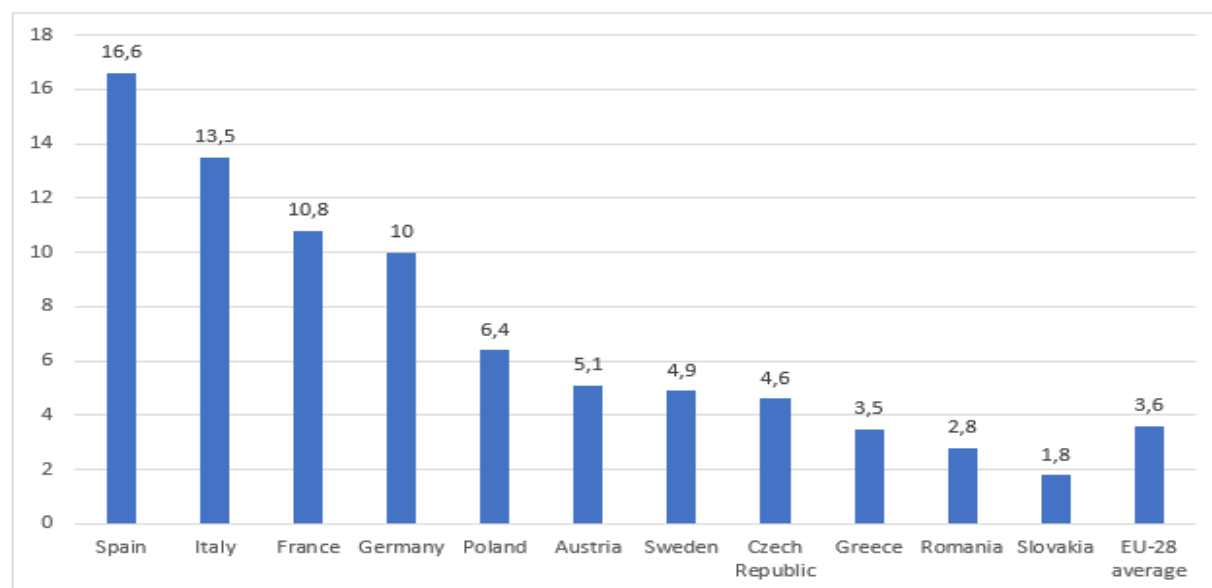
3. Results and Discussion

3.1 Total organic area

The total organic area in the EU-28 (i.e. the area fully converted to organic production and area under conversion) was 10.3 million hectares in 2014 and continues to show an upward trend. The increase in area between 2013 and 2014 was 2.3 %, compared with + 0.2 % between 2012 and 2013.

From 2013 to 2014, Croatia, Malta and Slovak Republic recorded growths of over 10 %. Spain presented the highest increase (100 300 ha), followed by Italy (70 700 ha). In 12 EU Member States, the area of organic crops decreased between 2013 and 2014. The most significant declines were in Bulgaria and Cyprus where the organic area fell by 8 373 ha (– 15 %) and 428 ha (– 10 %), respectively.

The size of the organic area differs considerably from one EU Member State to another. In terms of the total organic area of each EU Member State as a share of the total EU-28 organic area, four countries together accounted for around 51 % in 2014: Spain (16.6 %), Italy (13.5 %), France (10.8 %) and Germany (10.0 %). We can see it on the figure 1.

Figure 1: Share of total organic area in EU-28 in 2014 (% of total EU-28)

Source: Eurostat

Organic production comes from fully converted areas. Before an area can be considered as “organic”, however, it must undergo a conversion process. The total organic area is the sum of the “area under conversion” and the “fully converted area”. The area under conversion as a percentage of the total organic area can give an indication of the potential growth in the organic sector in the years to come. In 2014, seven EU Member States had shares of less than 10 %, thirteen EU Member States had shares between 10 % and seven exceeded 20 % with the biggest shares for Malta (49.7 %), Croatia (55.1 %) and Bulgaria (68.3 %).

3.2 Crop types

Organic production area is divided into three main crop types: arable land crops (mainly cereals, fresh vegetables, green fodder and industrial crops), permanent crops (fruit trees and berries, olive groves and vineyards) and permanent grassland. Permanent grassland (mostly used for grazing organic livestock) occupied 4.7 million ha, which represented 45.7 % of the EU-27 total organic crop area. Arable crops came close with 42.8 %, while permanent crops made up the smallest share (11.5 %). In 10 EU Member States arable land crops accounted for more than 50 % of the organic area, while in 14 EU Member States permanent grassland predominated (> 50 % of organic area). Arable crops were highly predominant in Finland, Denmark and Sweden with shares of 98 %, 85 %, and 78 % respectively. Ireland (92 %), the Czech Republic (87 %) and Slovenia (84 %) were in the lead in terms of permanent grassland.

In most EU Member States permanent crops accounted for a relatively low share of the fully converted area of these three main types (in 16 EU Member States it was less than 5 % of the converted area). In 2014, permanent crops accounted for between 10 % and 20 % in Bulgaria, Croatia, Greece and Portugal, while in Italy and Spain the share was over 20 %. Cyprus and Malta had the highest shares, with 44 % and 69 % respectively. Olive trees dominated in these two countries.

Among the arable crops, cereals and green fodder occupied the largest area. Figure 2 shows that in 14 EU Member States, these two categories together accounted for more than 80 % of the total organic arable land (fully converted and under conversion) in 2014. Lithuania and Romania had the highest shares of cereals among EU Member States (61.8 % and 55.7 % respectively) and Sweden and the United Kingdom the highest shares for green fodder (67.9 %

and 62.7 % respectively). Bulgaria, with 37.4 %, had the highest share of industrial crops. The shares of fresh vegetables in Malta (32.3 %) and the Netherlands (29.2 %) were the highest in the EU-28.

3.3 Organic livestock

Raising livestock and poultry, for meat, dairy and eggs, is another traditional farming activity that complements growing. Organic farms attempt to provide animals with natural living conditions and feed. Organic certification verifies that livestock are raised according to the USDA organic regulations throughout their lives (USDA, 2015). These regulations include the requirement that all animal feed must be certified organic.

According to FAO (2001), organic livestock may be, and must be, treated with medicine when they are sick, but drugs cannot be used to promote growth, their feed must be organic, and they must be pastured.

Also, horses and cattle were once a basic farm feature that provided labour, for hauling and ploughing, fertility, through recycling of manure, and fuel, in the form of food for farmers and other animals. While today, small growing operations often do not include livestock, domesticated animals are desirable parts of the organic farming equation, especially for true sustainability, the ability of a farm to function as a self-renewing unit.

The 2014 figures for organic livestock as a share of all livestock showed that, with respect to cattle, pigs and sheep, some EU Member States using organic methods were rearing remarkably large shares of animals-cattle and sheep being the most popular. In Austria, 33.0 % of the sheep and goat were reared using organic production methods, but organically reared cattle also achieved a noteworthy 19.2 % share (with organic dairy cows reaching 18.0 % of all the Austrian dairy cattle, the highest in the whole EU-28). Austria also top ranked in the organic pig production with 2.4 % of the national pig production.

Sweden had the highest percentage of organic cattle in total cattle population with 19.6 %. Seven EU Member States had over 10 % of organic cattle, of which Denmark, Latvia, Sweden, and the already mentioned Austria, also had more than 10 % of organic dairy cows. As for organically reared pigs, they accounted for less than 1 % in most EU Member States.

The developments in the individual EU Member States from 2013 to 2014 differed according to the species. Romania and Finland recorded large increases in the number of organically farmed sheep (+ 43.0 % and + 24.3 % respectively), while Romania and Croatia accounted for the largest increases in cattle (+ 68.0 % and + 11.7 %). Estonia had the biggest increase for pigs (+ 139.4 %). In Poland, there was a significant drop in the number of organically reared cattle, pigs and sheep, which decreased by 13.3 %, 18.6 % and 8.2 % respectively. Greece and Austria recorded a negative trend in all three categories too.

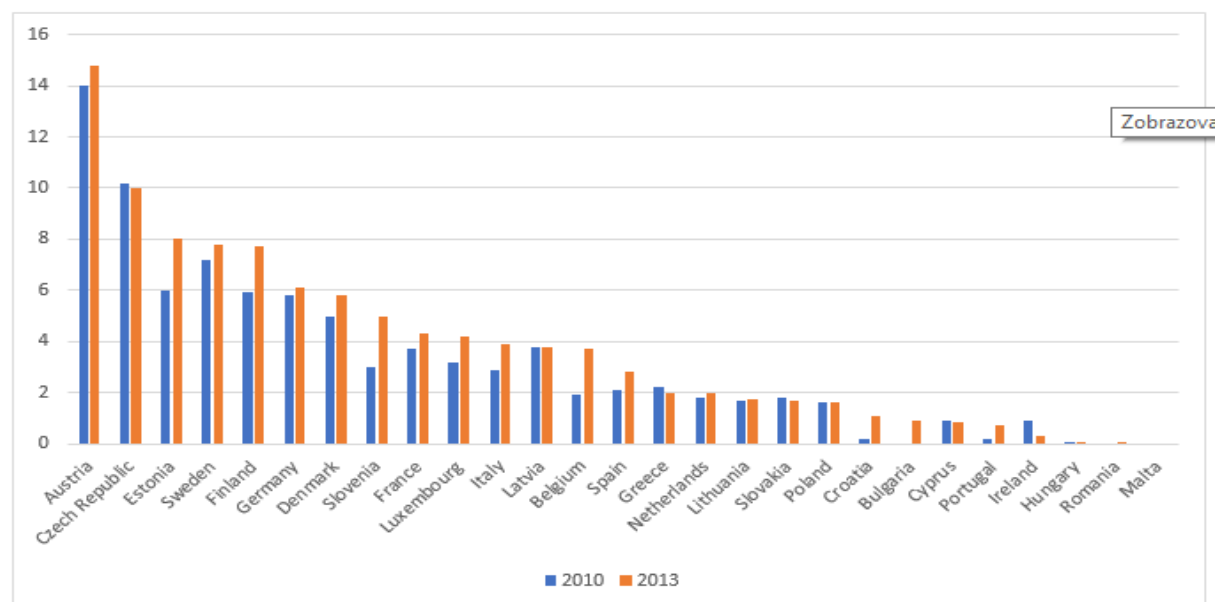
3.4 Organic operators

Activities within the organic sector include the food chain from production at farm level right through to industrial processing. Import, export and other activities, such as wholesale and retail trade, are also included. The production of organic crops and the rearing of organic animals are the main activities in the organic sector at farm level, but the processing of goods is also important. Producers accounted for over 80 % of the 312 500 operators in 2014 in the EU-28.

In 2014, there were close to 257 100 organic producers in the EU-28. Spain and Poland each accounted for over 10 % of the EU-28 total, with Italy out in front with 17.9 %. France, Germany, Greece, Austria and Romania each had shares above 5 %. In 11 EU Member States the share was under 1 %. In Slovak Republic it was only 0.13 % in 2014.

Figure 2 shows that between 2010 and 2013 the number of organic holdings increased in early all EU Members States except Greece, Cyprus and Ireland.

Figure 2: Share of organic holdings in total agricultural holdings in 2010 and 2013 (%)



Source: Eurostat

Between 2013 and 2014 the number of organic producers in the EU rose by 2.1 %. The highest increases were recorded in Bulgaria (+ 39.9 %), Belgium (+ 15.4 %), Slovenia (+ 13.6 %) and Croatia (+ 12.0 %). Drops were registered in 10 EU Member States (Denmark, Greece, Latvia, Malta, the Netherlands, Romania, Slovak Republic, Finland, Sweden and the United Kingdom).

The average size of organic agricultural holdings in 2013 was estimated at 36.7 ha for the EU-27 as a whole, compared with 16.1 ha for all agricultural holdings. In general, the average size of holdings in the organic sector was larger in most EU Member States and smaller only in Bulgaria, Germany, Ireland, France, Luxembourg and the United Kingdom. The most noticeable differences were seen in Slovak Republic (476.2 ha for organic holdings compared with 80.7 ha for all holdings) and Hungary (119.2 ha compared with 9.5 ha).

3.5 Manufacture of organic products

On the basis of the NACE Rev.2 classification, in 2014, most of the 38 000 organic processors in 25 EU Member States, where data was available, were engaged in the processing and preserving of bakery and farinaceous products (22.6 %), fruits and vegetables (18.5 %) and the processing of vegetable and animal oils and fats (15.8 %).

Table 2: Number of organic processors by type of economic activity in EU Member State (NACE Rev. 2) in 2014

	Meat/Meats products	Fish, crustaceans, molluscs	Fruit, vegetables	Vegetables and animal oils, fats	Dairy products	Grain mill products/starches	Bakery and farinaceous products	Other food products	Prepared animal feeds	Total
EU-28	3 368	422	7 019	6 008	1 900	2 345	8 592	7 744	631 38	029
Belgium	76	8	116	24	64	44	263	267	9	871
Bulgaria	1	0	20	29	14	1	10	70	1	146
Czech Republic	104	0	65	18	63	32	36	111	39	468
Denmark	141	26	69	14	72	21	96	194		633
Germany	x	x	x	x	x	x	x	x	x	x
Estonia	12	2	40	5	5	20	14	8	4	110
Ireland	28	25	11	3	10	4	10	22	3	116
Greece	49	5	286	788	55	57	59	241	29	1 569
Spain	356	38	1 439	631	121	81	634	840	51	4 191
France	1 053	136	733	168	305	535	5 640	1 398	120	10 088
Croatia	2	0	33	37	8	8	2	10	0	100
Italy	515	76	2 666	3947	735	1 113	1255	2 140	183	12 630
Cyprus	0	0	4	33	2	1	2	6	0	48
Latvia	17	0	47	2	22	6	8	51	2	155
Lithuania	3	4	9	2	7	4	7	28	2	66
Luxembourg	6	1	4	1	3	6	27	16	3	67
Hungary	28	1	157	26	14	39	27	143	1	436
Malta	x	x	x	x	x	x	x	x	x	x
Netherlands	186	25	220	28	124	40	148	281	46	1 098
Austria	x	x	x	x	x	x	x	x	x	x
Poland	25	5	126	9	11	33	44	101	2	356
Portugal	30	11	224	158	16	42	45	194	2	722
Romania	0	0	30	13	8	13	17	24	2	107
Slovenia	15	0	22	8	6	13	27	243	3	337
Slovakia	8	0	11	1	18	7	8	27	44	91
Finland	96	8	78	16	34	84	90	81	44	531
Sweden	143	30	155	24	38	72	92	220	13	787

Source: Eurostat

Table 2 shows that Italy and France dominated the ranking of the number of organic processors within the nine categories of food manufacturing activities. France had the highest number of processors in the meat and meat products, fish, crustaceans and molluscs and also bakery and farinaceous products. Italy is top ranking in all the other categories. Slovak Republic had in 2014 only 91 organic processors, the most (44) in prepared animal feeds and the lowest position, 0 processors was there in category fish, crustaceans and molluscs.

4. Conclusion

Since 1990 the market for organic food and other products has grown rapidly, reaching \$63 billion worldwide in 2012 (Willer et al., 2013).

Biodiversity from organic farming provides capital to humans. Species found in organic farms enhance sustainability by reducing human input (Perrings et al., 2006).

According to a more recent study in ScienceDigest, organic best management practices shows an average yield only 13% less than conventional (Seufert, 2012). According to Brian (2014) and Schutter (2014) In the world's poorer nations where most of the world's hungry live, and where conventional agriculture's expensive inputs are not affordable by the majority of farmers, adopting organic management actually increases yields 93% on average, and could be an important part of increased food security.

In last 7 years from 2010, total organic area still increasing in the EU, which has significant meaning for agriculture. Total organic area made up 5.9 % of total EU-28 UAA in 2014. Main crop types in the organic sector: arable crops, permanent crops and permanent grassland. Cattle and sheep were the most popular species. More than 80 % of organic operators were producers. The number of organic producers has increased by 2.1 % between 2013 and 2014. The average size of agricultural holdings in general was larger in the organic sector. Bakery and farinaceous products and fruit and vegetables dominate.

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Express Methods' Application for Calculating the Labour Capacity as a Business Ethics Element of Machine Building Enterprises

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Abstract

Within the framework of this article, it is pointed out that the accelerated methods of determining labor intensity and the product's forecast price are able to serve as a management tool, and play an important role in the complex process of making effective management decisions.

The importance of adapting the principles of business ethics in modern machine building in Russia is difficult to underestimate: justice, tolerance and attention to the consumer and business partner is the potential basis for a long-term business strategy. The application of methods for the rapid calculation of labor intensity is advisable in the practice of Russian enterprises. This facilitates the rapid conclusion of the contract and the receipt of an advance from the consumer. Or this helps to exclude unproductive expenses, because it involves the calculation of production costs and prices at the design stage of the product.

Keywords: business ethics, machine building enterprises, methods for the rapid calculation

JEL Classification: C44, C88, L91

1. Introduction

The object of the research – express methods of calculations of the production cost and determining the projected price of the products in the machine-building enterprise. The subject of the research is questions of business ethics involved with the rapid reaction on the demands of the consumers to get information about the potential ability, capacity of production of the certain type of products and about its costs. Authors of the article determined following objectives (Božek & Pokorný, 2014):

- determine the role of business ethics in the implementation of the production performance activity;
- generalize and systematize components of business ethics in Russia;
- substantiate appropriateness of applying express methods of labor intensity capacity calculations to reduce duration of the cycle of entering into a contact with the clients.

2. Modern globalization processes vs. global economical

Modern globalization processes complicate global economical space. It is difficult to study questions of business ethics such as trust between business partners, fair competition, and responsibility of the business before personnel, consumers and society in a whole, fighting corruption, superiority of the shareholders interests before the personal interests of the

executive managers without studying the principles of business ethics. (Vogel, 2004; Straka, Bindzar & Kadukova, 2014)

Studies of M. Fridman had influence on the development of given branch of science. As a result, big shift happened in the research of business and corporate ethics in 1930 s. At that time Australian psychologist Elton Mayo developed doctrine of human relations and pointed out that psychological factor plays determining role in the production. By the beginning of '80s, business ethics became important subject of research. A lot of books were written about business ethics, and majority of the business schools included it in their educational program. Today amongst prominent researchers of business ethics, could be mentioned researchers as R. de George, D.D. Vogel, T. De George Richard, R. Anderson, P. Berd, J. Chestara, D. Jager and others.

Positive influence of the business ethics on the productivity and success of the company has been discussed for some time. Also there is no doubt that such ethic principles as equity, respect, tolerance may affect efficiency, labor productivity and quantity of production defects. The key problem, though, is that evidence of influence might be described only on qualitative level. Unfortunately, there is no methodological or practical elaboration to give it quantitative evaluation, and, therefore, it is challenging to determine the specific field of research. That happens because there is no common methodology in that field and also widespread skepticism and opinion that mostly businessmen will ignore ethical norms if following these norms would lead to losing profit (Korshunov, 2007; Kollar, Nikitin & Straka, 2015). Institutional transformations in Russian economy caused difficulty in understanding and resolving variety of problems. One of them is problem of adaptation and harmonization of the relationships between industrial enterprise and different segments of economy.

In the post-perestroika period, in the conditions of decreasing ability of the consumers to pay and break from long-standing economic relationships, the main problem was to plan activities and taking sound decisions which would correspond to the changes in the market conjuncture, but not the search and establishing social reference points. Time went by, and acquired experience points out that today most Russian businesses do not have developed practical skills of business ethics and cannot establish long-lasting and productive relationships with the business partners, suppliers, consumers and their own personnel. (Trebusa, Straka, Rosova & Malindzakova, 2015)

In today's economic science, the industrial enterprise is defined as certain system, which includes complex of interacting elements: Materials, financial and work resources, function of which is brought under control of one goal. Existence and development of the company depends on the movement and reorganization of the included flow of materials, energy, and information into the desired result in the form of manufactured products, services and profit (Byrd, 2004).

At the same time, the company functions in the external environment; thus, it is sensitive to the influence of the market conjuncture and is a subject to the transition from one qualitative state to the other.

3. Systemization and processing information

Transformation of overall target function leads to the changes in performance of the separate subdivisions and in the whole company.

The management of the industrial enterprise starts with the systemization and processing information of the main branches, and it is a complex and multifaceted process of coordination,

objective evaluation and decision making in the field of objects of management (material and financial resources, personnel, equipment, et cetera.)

Development of business ethic and ethics in business relationships in Russia is difficult because of absolutely majority of companies act in the conditions of uncertainty of economic conjuncture and severe competition with the foreign mechanical engineering. In the conditions of the survival, the question of trying to withhold all the partners is not the main question, and part of them disappear, or contactual relationships are torn, decreasing potential volume of sales. Solving the problem of decreasing defects or development of innovatory offers also is not prioritize. Indeed, it is hard to say that there is a correlation between, for example, levels of profitability and development of principles of business ethics with the specific company, but given task cannot be described with the formal relationship, with mathematical function or graph of dependent variables; however, it is undeniable fact that thoughtfulness and respect of business partners, quick response in regards to his desires and demands allows establish quality and long-lasting connections and can be considered as nonmaterial fund and stabilized development. (Anderson, 1994)

The most popular segments in the structure of import of mechanical engineering became import of telephones, cars, auto parts, engines, computing devices. Traditionally, in import of the product of mechanical engineering, China takes lead with 23.4 billion dollars, Germany with 10.4 billion dollars. Other countries of the Pacific region such as Japan and South Korea and also U.S. have significant contribution. Moscow receives more than 40 percent of imported mechanical engineering goods. Saint Petersburg, Moscow, Tyumen and Kaluga region are the five top importers of the mechanical goods. (Trebuna, Straka, Rosova & Malindzakova, 2015)

Some experts come to an opinion that limiting the volume of imports of the mechanical goods in 2014-2016 opened the possibility for replacing imported goods with the Russian products. Diesel engine building, production of power and hydraulic equipment is expected to be most successful; although, without learning business ethics, rules of conducting negotiations, respecting clients, it is hard to achieve success even in the conditions of reducing the influence of foreign market.

4. Data and Methods

Adapting the questions of business ethics to small and medium mechanical enterprises in Russia, authors of this article suggest to turn to production function, analyze patterns developing in the process of production of goods and services. In multi-commodity production, evaluation of labor intensity and cost price in manufacturing product, on one hand, is an important part of the production planning and, on the other hand, is complicated by calculations applied to each individual order. In theory, different methods exist in organization and planning production activity in the industrial enterprise. In mechanical engineering, the most common method of calculation is technological process (studying technical requirements, execution of working drawings, development of technological process.) (Anderson, 1994)

The said method is the most precise, but at the same time the most labor intensive and takes the most time because that includes analysis of technological details, selection of billet, selection of technological basis, development technological process, determining allowances and operational sizes, selection of technological equipment and designing equipment, calculation of mode of processing and main (machine) time. (De, 2003; Fridman & Hayek, 2003) Cycle of technical operation, preceding production process, includes organization of construction operation (development of technical task, technical proposal, development of working documentation) and technological operation of production (development of technological

process, selection of procurement methods, designing of equipment.) This way, each order requires time and labor cost.

At Russian enterprises, for the purposes of planning, the labor productivity index is calculated not only in terms of output, but also in terms of labor intensity. The exponent of labor input makes it possible to calculate such a cost item as «labor costs». In Russian practice, it is not innovative for mechanical engineering companies to start technical preparation of the production from the moment of the receiving of technical requirements on the goods (and till the moment of conclusion of the contract on the production and receiving prepaid expenses) to achieve the goal of modern execution of individual order (goods and single assembly unit.) (Fridman & Hayek, 2003)

5. Results and Discussion

This risky situation can lead to occurrence of expenses that are not involved in production: In this case there is no agreement on price, the contact with the consumer will not be entered; but design engineer and process engineer carry out necessary volume of work and spend their working time, which the employer will have to cover. Because customer is interested in the price and possibility of execution of the production with the certain technical requirements, efficiency of the evaluation of the labor intensity and cost price at the stage of projecting the product is important condition for the industrial companies to be able to compete (De, 2001; Božek & Kňážík, 2013).

For the given goal, method of technological process is not appropriate because it takes long time for the development and negotiation, and that is why applying it on the stage of order processing is practically impossible. Series of methods were developed that would allow to determine prognosis of labor intensity without technological process as an alternative in theory and practice of production activity for Russian companies. Most often for the operational calculation at the enterprise, the analogous method is used, the use of which is expedient for the design of typical products. (Dyakin, 2004; Jager, 2004)

Given method implies that for the parts that order was received, analogous part that has similar geometric forms is selected. Along with the analogous method, method of the direct settlement and method of expert review and benchmarking methods are used.

6. Conclusion

According to the authors of the research, implication of the method of rapid calculation of the labor intensity makes sense in the practice of Russian companies and contributes speedy conclusion of the contract; or contributes exclusion of expenses not involved in the production, because it calls for calculation of cost price and price on the stage of designing the product, and designing of technological process and designing of the equipment begins only as a result of conclusion of the preliminary contract.

Important of adaptation of the principles of business ethics in the modern mechanical engineering is hard to underestimate: Fairness, tolerance and paying attention to consumers and business partners makes up potential basis for a long-term business strategies. Under this article it is pointed out that accelerated methods of determining labor intensity and prognosis of the prices on goods can serve as a managerial tool and play important role in the complex process of making effective administrative decisions.

With the further development of corporate ethic in Russian mechanical engineering, accompanied by development of new scientific research in the given theme, further research and development of the topic is possible.

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Price analysis and competitiveness of the dairy supply chain

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Abstract

The dairy sector represents one of the most important branches of agriculture and food industry in Slovak Republic. However, the sector is losing its scope continuously, also production is diminishing and moreover it faces several problems affecting the sector (EU milk quota regime has come to an end in 2015, a drop in prices paid to producers and the increase in the cost of animal feeding, etc.). The production of milk belongs to the prospective sectors of the agriculture in Slovak Republic, mainly due to the natural conditions, extraordinary suitable for breeding of dairy cows thus it is crucial to restrain a decreasing trend in breeding of dairy cows. The main aim of the paper is to investigate price levels of the dairy products, vertical linkages and competitiveness of the dairy supply chain. This paper addresses the issue of vertical coordination in terms of providing information concerning the performance of dairy supply chain in Slovak Republic. More specifically, the paper examines the development of profit and loss in milk production, provides an analysis of costs of milk production and overview of performance at processor level. Additionally, it deals with consumption patterns and marketing margins in the examined sector. Evaluation of competitiveness is based on revealed comparative advantage (RCA) and indicator of comparative price level (CPL).

Keywords: competitiveness, margin, milk, price

JEL Classification: Q11, Q13, Q17

1. Introduction

The food supply chain is complex and heterogeneous, exposing a wide diversity of products, enterprises and markets. It connects three main economic sectors: the agricultural sector, the food processing industry and the distribution sectors (wholesale trade and retail trade). These sectors are linked through transactions carried out at specific prices between the various agents of the chain, e.g. farmers, food processors, wholesalers, retailers and final consumers. Specificities of the product (e.g. nature, seasonality, perishable, and storability), the market structure (e.g. competition at each step of the chain, number of intermediaries in the chain) and existing public policy are the factors that influence the price formation through the food supply chain (Commission of the European Communities, 2009).

A key characteristic of successful values-based supply chain is effective information flow, according to Handfield and Nichols (2002). A lack of information or distorted information flows in the supply chain can cause significant problems such as increased design time, misguided capacity plans, missed production schedules, excessive inventory investment, ineffective transportation, poor customer service, and lost revenues. On the other hand, thanks to effective information flows called "information visibility" value chain partners are able to share forecasts, manage inventories, schedule work, and optimize deliveries. These business activities can result in reduction of costs, improvement of productivity and creation of greater value for the final customer in the chain. Furthermore, partners are able to evaluate performance, detect problems and engage in problem solving (Lyson et al., 2008).

Swinnen (2007) explains that there are developments in the dairy supply chain that point to positive effects of vertical relations. For instance, there are indicators that the quality of milk produced by Slovak farms has improved in recent years. Additionally, the share of milk in the highest quality classes has increased from an already satisfactory level in the late 1990s up to 95% of all milk delivered and milk of that quality is acceptable according to EU standards. Concerning the farm level, the sector has benefited from investment support through the EU Sapard Funds, aiming at improving the quality of milk delivered. However, low-capacity dairies can release their production only on domestic market and are assumed to be ceasing trading.

2. Data and Methods

The aim of this paper is to analyze the performance of dairy supply chain in the Slovak Republic. More specifically, the paper examines the dairy sector in facts and figures concerning the development of profit and loss in milk production, provides an analysis of costs of milk production and overview of performance at processor level and consumption patterns. Additionally, it deals with marketing margins and competitiveness of the examined sector.

The data were obtained from The Research Institute of Agricultural and Food Economics online database www.vuepp.sk, an online statistical database of Agricultural paying agency www.apa.sk and Statistical office of the Slovak Republic www.statistics.sk. The data covers the time period from January 2004/2007 to December 2015.

The paper also outlined the basic concepts of marketing margins. The marketing margin is the difference between the retail and the producer or farm gate price representing marketing costs such as transport, storage, processing, wholesaling, retailing, advertising etc. The total gross margin or the total price spread for a product that remains unchanged during the marketing process as the difference between the price per unit of that product at the farm gate and the price per unit when sold to the final consumer (retail price). Otherwise, the similar information can be obtained using the following formulas (Hudson, 2007; Bielík et al., 2014):

$$\text{Farmer's share (\%)} = \frac{FP}{RP} \times 100 \quad (1)$$

$$\text{Total Gross Margin (\%)} = \frac{RP - FP}{RP} \times 100 \quad (2)$$

$$\text{Total Mark - up (\%)} = \frac{RP - FP}{FP} \times 100 \quad (3)$$

Where: FP = farm-gate price; RP = retail price.

In this study, the index of revealed comparative advantage is calculated in order to investigate competitiveness of the Slovak dairy sector in relation to that of the EU (Fertő and Hubbard, 2002; Batra and Khan, 2005; Laursen, 2015).

$$RCA_{ij} = (X_{ij}/X_{wj})/(X_i/X_w) \quad (4)$$

Where: X_{ij} = i th country's export of commodity j , X_{wj} = EU exports of commodity j , X_i = total exports of country i , X_w = total EU exports. In case of $RCA > 1$, the export value for a product is greater than import value of the product and the country dealing with external trade of the product has comparative advantage and thus has high competitive power (Selli et al., 2010).

RCA II. is used for the assessment of the net trade performance of a country and the index is calculated as follows:

$$RCA II = (X_{ij} - M_{ij}) / (X_{ij} + M_{ij}) \quad (5)$$

Where: export of country "i" in the commodity group "j" M_{ij} = import of country "i" in the commodity group "j". RCA II. reaches values between -1 (when export does not exist) and +1 (when import does not exist). In case the results are negative, up to -1, the country has a comparative disadvantage. On the other hand, if the results are positive, up to +1, the country has a revealed comparative advantage (Hudáková, 2013).

Comparative Price Level (CPL) is defined according to Matošková et al. (2013):

$$CPL = \frac{P_d}{P_f} \quad (6)$$

Where: P_d = price of a commodity produced in the Slovak Republic, P_f = price of a commodity produced elsewhere than in the Slovak Republic. If $CPL \leq 1.15$, it means price competitiveness on the domestic market. If $CPL \leq 0.85$, it means price competitiveness on foreign markets.

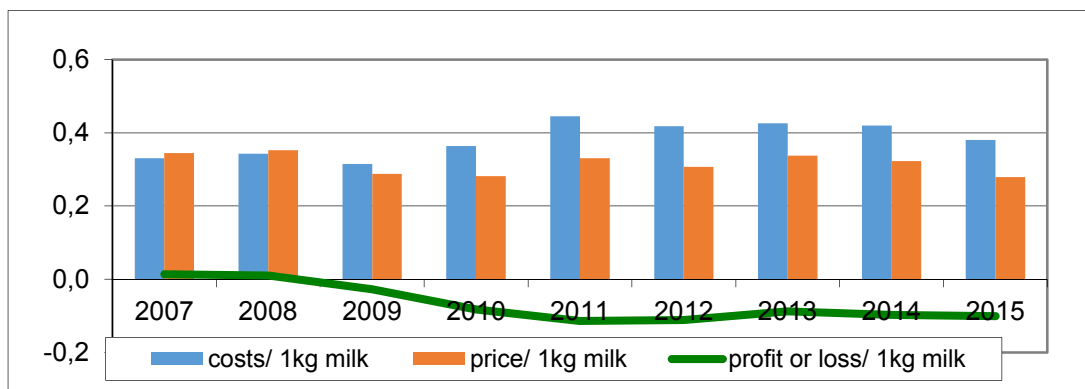
3. Results and Discussion

3.1 Performance at farm level

According to data from Animal production research centre in Nitra, the situation is unfavourable relating to income statement of milk producers. Sample of milk producers have recorded loss since 2009. In general, an increase in milk yield has consequences in a rise of costs of milk production. Cost of feeding contributes highest to total cost of milk.

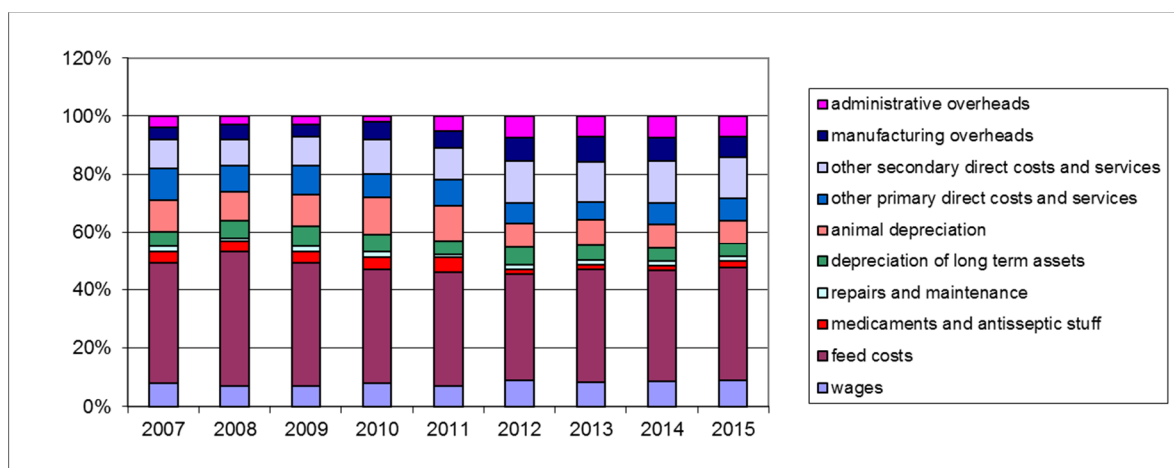
Situation on the feed market has had the main impact on the costs of milk production and furthermore resulted in the decrease in returns. Feed represents approximately 40 per cent of costs of production; in 2008 the share was 46 per cent of total costs. The financial crisis caused that the prices of shares fell down and investors invested their capital into commodity market and therefore the prices of cereals went up in 2010. Additionally, the drought and poor harvest of cereals resulted in higher feed prices causing a rise of costs of milk production. This upward trend in fuel prices and the cancelation of tax benefit of red diesel in 2010 were also main drivers for cost increase in cereals as well as in feed used in milk production in 2011.

Costs of milk production increased by about 15% in 2015 compared to 2007 and cow milk was produced for 0.38 EUR per kilogram. Additionally, the dramatic year on year increase in breeding costs of dairy cows was examined in 2011 (0.445 EUR/kg), reaching the value of 7.186 EUR per feeding day of dairy cow. More specifically, breeding costs rose by 30% in comparison to 2010 and by 33% compared to 2007. From the return side, the average milk price dropped by 14% in comparison to the previous year and by 19% compared to 2007. Therefore, profitability of dairy farms declined significantly and there was a loss of 0.101 EUR/ kg calculated in 2015 (Figure 1).

Figure 1: Development of profit and loss in milk production

Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

As shown in Figure 2, other primary direct costs and services (breeding and veterinary procedures, insurance, energy consumption and social contributions) as well as other secondary direct costs and services (costs of own trucking, other services) have had a share about 10% of total milk production costs in the examined period. In 2007 – 2015 wages accounted for 8% of the total costs. Medicaments and antiseptic stuff accounted for 3% on average, and this figure was very similar for manufacturing overheads, about 5% during the time period. On the other hand administrative overheads accounted for 3% on average. Animal depreciation took up 9% in the milk production costs and depreciation of long-term assets accounted for 5%. Repairs and maintenance represented only a small minority of the total milk production costs, on average only 2%. Comparing to 2007, almost all costs items recorded upward trend in 2015. It means that year on year increase was experienced in case of material expanses (+214%), other primary direct costs and services (+60%), feed costs (+21%), manufacturing overheads (+8%), costs related to repairs and maintenance (+30%), administrative overheads (+18%), other secondary direct costs and services (+20%), animal depreciation (+22%), wages (+26%).

Figure 2: Development of costs of milk production

Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

Milk production at farm level is the first stage in a three-level supply chain and represents market supply of raw cow milk. It is characterized by a structure of entities such as agricultural cooperatives, farms and other agricultural companies involved in breeding of dairy cows and

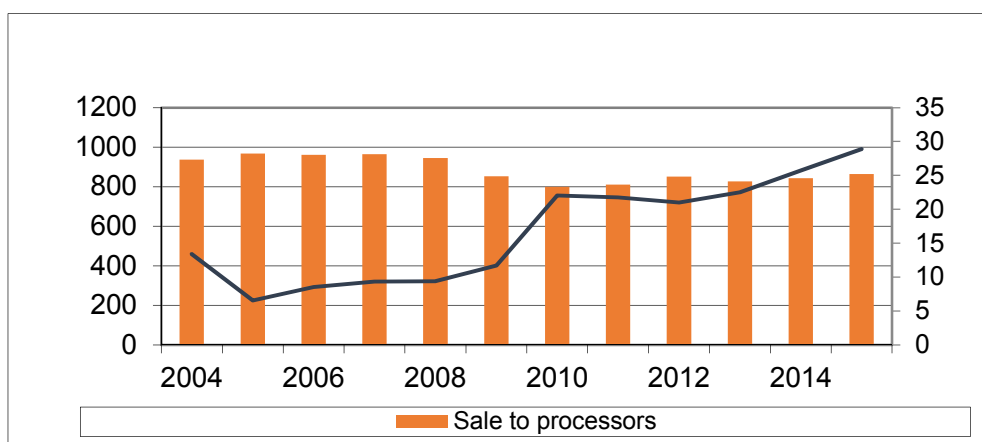
production of raw cow milk. Milk producers are the weakest element in the vertical supply chain due to the high fragmentation and its highly standardized product that results in weak bargaining power and poor distribution of milk margins. Therefore, there is a growing concern to organize themselves in associations in order to strengthen the position, competitiveness as well as bargaining power of milk producers.

The research study showed that 442 milk producers were registered in 2015/2016. More specifically, 271 agricultural cooperatives, 101 limited liability companies, 39 self-employed farmers, 27 joint stock companies and 4 other companies were registered (Agricultural Paying Agency).

Since 1st December 2012, dairies have collected milk from milk producers at a predetermined price due to the new terms and conditions in the milk sector. Act No. 335/2012 that amends and supplements Act No. 491/2001 Coll. on Organization of Market with Selected Agricultural Products. It means that all contracts between milk producers and dairies must be concluded prior to supplies and must contain, inter alia, a predetermined price or formula by which the price is calculated at the end of the month. This step eliminates situations when milk producers signed the contracts without knowing at what price and the amendments regarding to price issue were usually signed at the end of month. The law also allows milk producers to establish associations. The association must have at least five members. On one hand this law is expected to bring transparent flow of information concerning supplies, quality and prices and better relations with processors. On the other hand, processors consider these new rules as an administrative matter. Since March 2015, the EU milk quota regime has come to an end. Later on, milk has been added on the list of products with reduced VAT of 10% in Slovak Republic. This VAT reduction became valid on 1st January 2016 and it represents an effort of the country to support domestic agricultural producers.

The highest volume of milk deliveries to processors was experienced in 2005 (967.93 thousand tonnes). Compared to 2004, a decrease by 72.54 thousand tonnes (-7.74%) was recorded in 2015 in case of sale to processors. On the other hand, the volume of milk processed in organisations incl. direct sale has increased from 13.39 thousand tonnes in 2004 to 28.89 thousand tonnes in 2015. According to results, there is a tendency and willingness to increase direct sale from producers (Figure 3).

Figure 3: Development of milk sale from producers (in thousand tonnes)



Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

3.2 Performance at processor level

In general, production of market milk has slowed down since 2011 (297.4 thousand tonnes) in the comparison to 2015 (285.5 thousand tonnes). As can be seen from Table 1, the lowest volume of market milk was produced in 2006, amounted to 238,3 thousand tones representing a decrease by 30.7 thousand tonnes in comparison to 2005 (296 thousand tonnes). In 2007 production of market milk was amounted to 252.3 thousand tones representing an increase by 5.9 per cent comparing to the previous year. Additionally, production of market milk slowed down again and reached the value of 242.0 thousand tonnes in 2008. Since 2009, market milk production grew inter-annually from 262.7 thousand tonnes in 2009 to 321.5 thousand tonnes in 2013. Comparing to 2004, there was a drop down by 12.2 thousand tonnes (-4%) in 2015.

After the EU accession, growth dynamics of production of butter and products from milk fat has slowed down and the development has experienced a drop down from 13.1 thousand tonnes in 2004 to 10.0 thousand tonnes in 2005. The total domestic production of butter reached a volume of 10.3 thousand tonnes in 2006. In 2007 production of butter grew inter-annually and 11.7 thousand tonnes of butter were produced. Period 2009-2010 is characterized by a downfall of butter production in comparison to 2008 (11.8 thousand tonnes). More specifically, production of butter and products from milk fat experienced decline by 14.4 per cent in 2009 and 15.3 per cent in 2010 comparing to 2008. The total production of butter was 12.4 thousand tonnes in 2015 which are 0.7 thousand tonnes less than in 2004 (Table 1).

During 2005-2008 the cream production rapidly increased year-by-year and reached 38 thousand tonnes in 2008. However, there was a decrease by 10.9 thousand tones observed in the following year. Positive development was experienced again in 2010 (29.3 thousand tonnes) and in 2011 (34.8 thousand tonnes). The production of cream increased by approximately 1.0 thousand tonnes in 2015 compared to 2004 (Table 1).

Although production of sour milk products grew inter-annually since 2004 its growth dynamics slowed down and production experienced a drop down during the period 2008-2010 according to Table 1. More specifically, the production reduced to the lowest level of 48.7 thousand tonnes in 2010. However, after this the production began to increase again and 65.1 thousand tonnes were produced in 2015, which was more by 14.9 thousand tonnes (+ 30%) in comparison to 2004.

As shown in Table 1 the biggest difference was recorded in case of milk powder. The critical point occurred in 2008 when production started to slow down and reached a volume of 11.7 thousand tones followed by production amounted to 7.3 thousand tonnes in 2009 and 4.3 thousand in 2010. A record drop by 10 thousand tones was registered in 2011 after reaching a peak of production amounted to 13.8 thousand tonnes in 2007. There was a decrease by 6.6 thousand tonnes (- 57%) experienced in 2015 in comparison to 2004 (11.5 thousand tonnes).

Regarding to cheese production, the peak of the production was reached in 2006 (59.5 thousand tonnes) followed by a decreasing trend. Afterwards, the production experienced the lowest value of 41.2 thousand tonnes in 2010. In comparison to 2004, there was a drop down by 2.5 thousand tonnes (-5%) experienced in 2015 (Table 1).

Table 1: Production of market milk and selected dairy products (1000 t)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Market milk	297.7	296.0	238.3	252.3	242.0	262.7	276.7	297.4	318.3	321.5	288.6	285.5

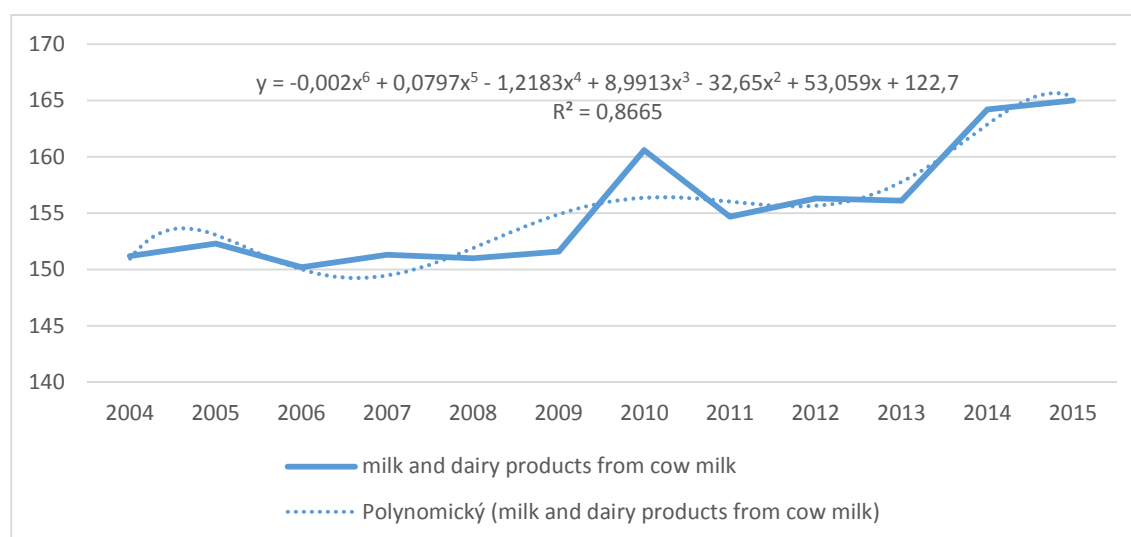
Cheeses	48.9	54.1	59.5	58.3	50.1	45.5	41.2	43.5	44.7	43.5	43.5	46.4
Butter & products from milk fat	13.1	10.0	10.3	11.7	11.8	10.1	10.0	12.2	12.3	13.6	12.8	12.4
Cream	31.2	30.5	34.0	35.0	38.0	27.1	29.3	34.8	31.9	32.3	32.3	32.2
Sour-milk products	50.2	51.4	52.0	54.0	51.0	50.8	48.7	54.4	62.2	63.3	62.1	65.1
Milk powder	11.5	12.4	11.0	13.8	11.7	7.3	4.3	3.8	4.3	5.1	6.0	4.9

Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

3.3 Consumption

In total 165 kilograms of milk and dairy products per capita were consumed in 2015, thus consumption experienced an increase by 13.8 kilograms (+ 9.13%) compared to 2004 when the consumption reached the value of 151.2 kg/per capita. On the other hand, there was a drop down by 5.9 kg (- 3.7%) recorded in 2011 comparing to 2010 (160.6 kg/per capita). Development of consumption of milk and dairy products has been decreasing through the period 2006 – 2009 and 2010 – 2013 due to a number of reasons (high retail prices of these products, lower retail prices of imported dairy products as well as low interest in the consumption). A seventh degree of polynomial function was used in order to express the long term trend of milk and dairy products' consumption. The coefficient of determination reaches the value of 86.65% (Figure 4).

Figure 4: Consumption of milk and dairy products in SR; (kg/per capita)



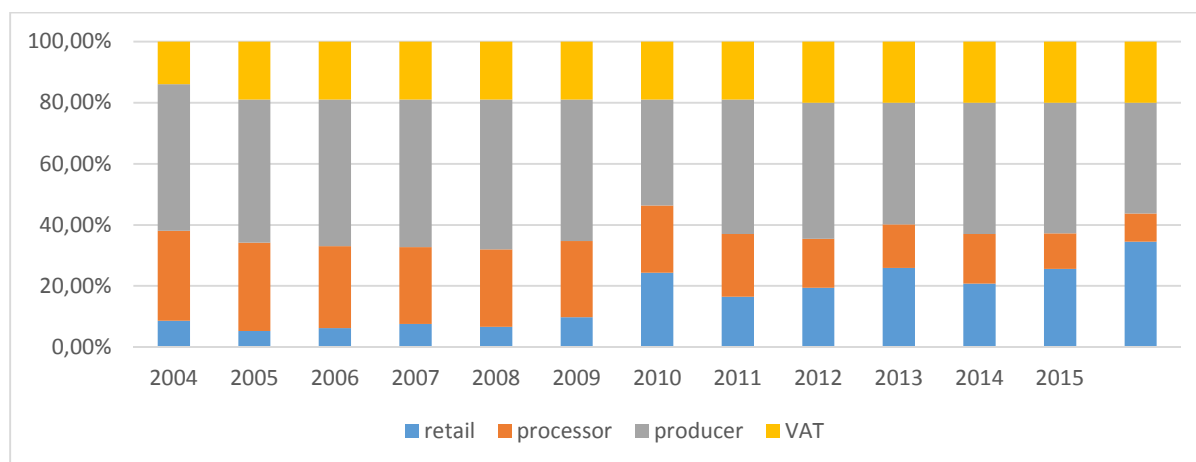
Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

3.4 Marketing margins

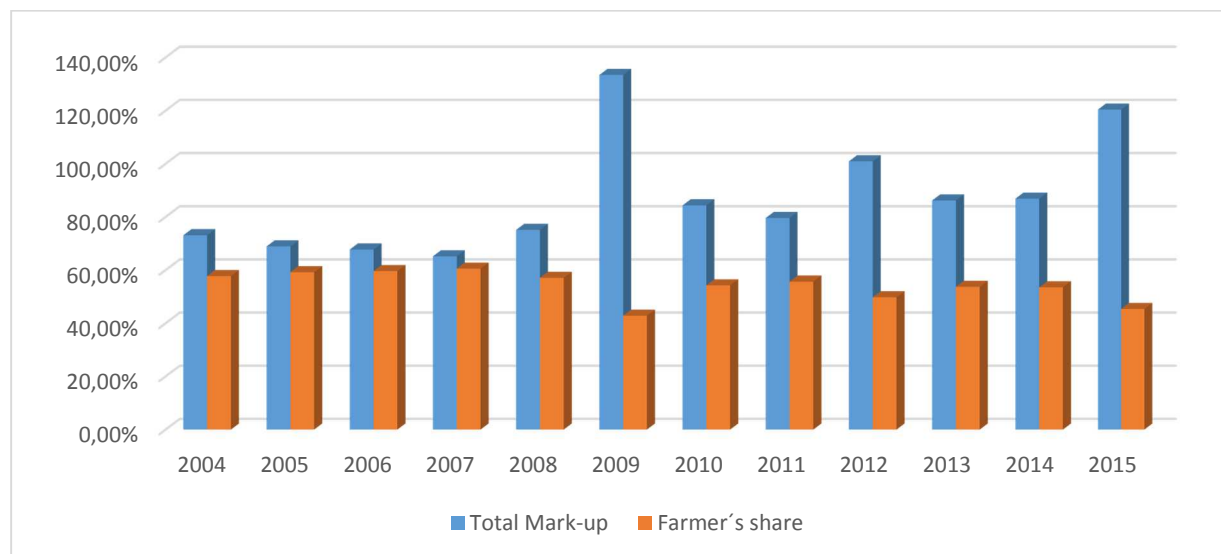
The average price of raw cow milk increased by 10.9% from 30.44 EUR/100 L in 2004 to 33.76% EUR/100 kg in 2008. Drought in Australia and New Zealand affecting milk production

in the 2nd half of the year 2007 causing a decline in milk production and historic high prices at the beginning of 2008. In 2009, the prices fell at all stages of the food vertical, although with significant differences in the dynamics of decline. Despite of the increase in processor prices as well as farm-gate prices since 2010, processor margin fell by 1.38 EUR/100 L (10.8%) in 2011 comparing to the previous year. In percentage terms, the gross margin dropped from 20.58% to 16.03%. Retailers meanwhile were able to retain a gross margin of 27.32% in 2011. The retailers' margin on cow milk increased between 2008/2009, rising by 7.08 EUR/100 L to 16.42 EUR/100 L. In percentage terms, the retailers' gross margin increased from 12.80% to 27.37%. However, it appeared that farm-gate and processors' margin significantly dropped down between 2008/2009. While the farm-gate margin dropped from 43.21% to 31.67%, the processor margin fell slightly from 24.99% to 21.97%. Retail margin and processor margin showed diverse development in the examined time period. The average value of the difference between processor and farm-gate prices is 13.66 EUR/100 L and average difference between retail and processor prices equal 13.37 EUR/100 L. Minimum value for retail margin was recorded in 2004 (5.41 EUR/100 L) and the peak was reached in 2011 (26.6 EUR/100 L). On the other hand, the minimum value for margin was in 2015 (7.05 EUR/100 L) and maximum values in 2004 (18.82 EUR/100 L) in case of processor margin. In 2010 both margins were almost equal. It is important to note that the level of retail margin shows the strong position of retailers in the supply chain of cow milk and their ability to realize increases in margins even during times of increasing costs and the economic recession (Figure 5). Farmer's share reached the highest value (60.63%) in 2007 whereas the maximum of the total mark-up (133.43%) was recorded in 2009 (Figure 6).

Figure 5: Development of margins (%)



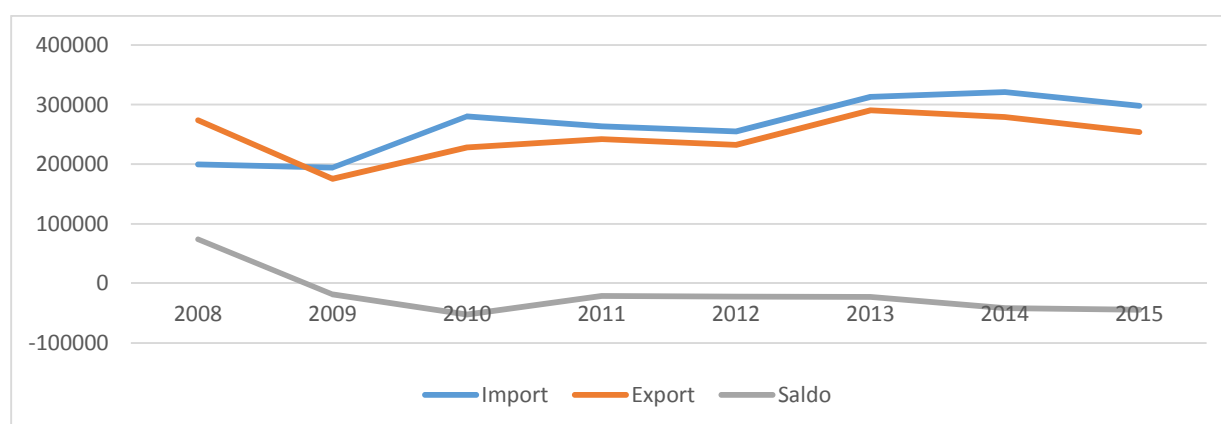
Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm; processor = semi-fat milk price (100 L excl. VAT), retail = semi-fat pasteurized milk price (excl. VAT); prices in 2003-2008 are converted by exchange rate 1 EUR= 30.1260 SK

Figure 6: Farmer's share and Total mark-up

Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

3.4 Balance of foreign trade and competitiveness

Export of milk and dairy products exceeded import only in 2008, afterwards imports clearly dominated over exports. Higher growth rate of import compared to export deteriorated trade balance after 2008. The reasons for the deteriorating trade balance of milk and dairy products are the economic crisis in the markets that begun in 2008 and drop down in milk production. Imports expanded reaching the value of 298 083 thousand EUR in 2014, which was 22 907 thousand EUR less compared to the previous year. Trade in milk and dairy products showed growing deficit (- 44 258 thousand EUR) in 2015 (Figure 8). Approximately 97% of milk and dairy products are mainly exported to the EU countries (Czech Republic belongs to the most important business trading), about 3% of dairy products are exported to the third countries.

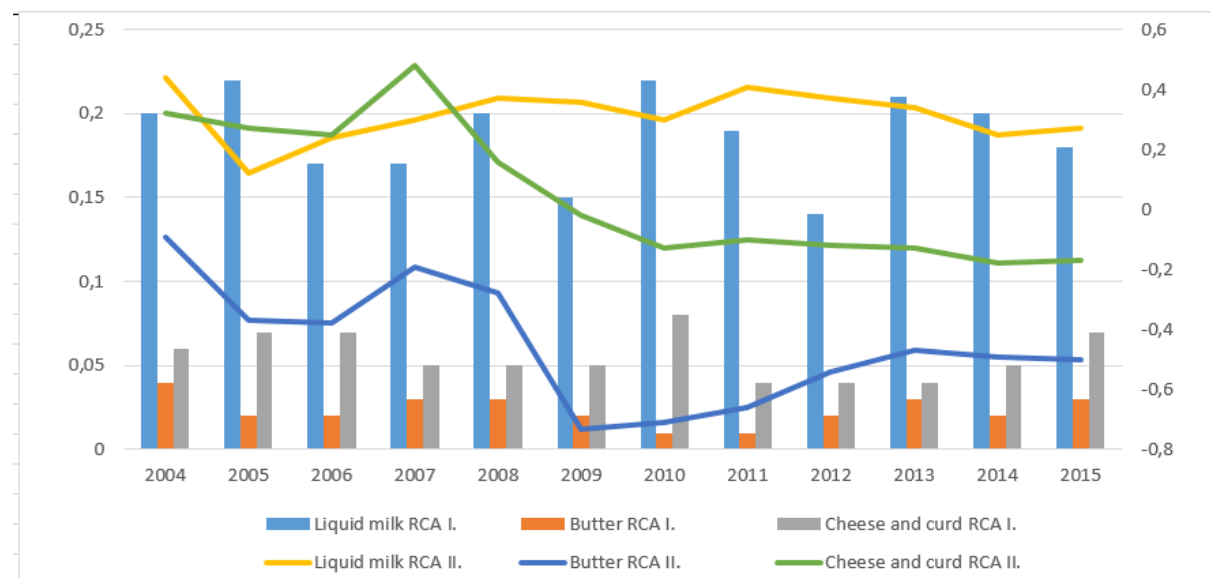
Figure 8: Balance of foreign trade (in thousand EUR)

Source: authors' proceedings; data from Statistical office of the Slovak Republic

Based on RCA I. index (left axis), Slovak Republic revealed comparative disadvantage in trading with EU due to the fact that the values are less than 1 over the analyzed period. According to the net trade performance index RCA II. (right axis), liquid milk examined positive values over the period, thus import of liquid milk has been diminishing and trade is characterized by revealed comparative advantage. On the other hand, butter trade showed that

imports prevailing over exports, therefore comparative disadvantage was revealed. A comparative advantage has been also revealed in case of cheese and curd during the period 2004-2008; however, the results indicated comparative disadvantage since 2009 (Figure 9).

Figure 9: RCA I. and RCA II.



Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

According to the indicator for comparative price level, the Slovak prices should be up to 15% higher than in the country from which we import the commodity. In case of raw cow milk, Slovak market was competitive during 2010-2015 against V4 countries, except 2009 when SR was not competitive against imports from Poland and Hungary. Furthermore, Slovak Republic was also competitive against Hungary on the domestic market in case of butter, except Poland during 2008-2011, 2013 and Czech Republic in 2009. However, the Slovak Republic was not competitive against imports of Edam cheese from Poland throughout the whole period, and Czech Republic during 2013-2015. Slovak market was competitive against imports from Hungary only in 2008 and 2011. On the other hand, for competitiveness on foreign markets, the prices of Slovak products should be at least 15% lower than in the country to which the commodity is exported. Based on this assumptions, Slovak Republic was competitive on the V4 markets only with semi-fat milk in Czech Republic and Hungary during 2008-2009 and in Poland in 2008 and 2015 (Table 2).

Table 2: CPL

		2008	2009	2010	2011	2012	2013	2014	2015
Raw cow milk	CZ	1,08	1,14	0,97	0,95	1	1,02	1,05	1,06
	PL	1,17	1,24	1,02	1,08	1,08	1	1,06	1,08
	H	1,04	1,18	1,05	1,02	1,02	0,97	1	1,03
Butter	CZ	1,15	1,25	1,13	1,13	1,2	1,19	0,92	0,86
	PL	1,63	1,31	1,18	1,28	1,13	1,16	0,91	0,94
	H	0,91	0,99	1,03	1	0,93	1,05	0,92	0,94
Edam	CZ	0,88	1,08	1,14	1,09	1,13	1,3	1,28	1,57

	PL	1,36	1,34	1,21	1,26	1,31	1,19	1,47	1,59
	H	0,93	1,17	1,16	1,07	1,18	1,17	1,26	1,44
Semi-fat milk	CZ	0,67	0,83	0,93	0,92	0,91	0,92	1,02	1
	PL	0,8	0,91	1	1,07	0,98	0,97	0,91	0,76
	H	0,8	0,71	0,85	0,9	0,91	0,92	0,86	0,92

Source: authors' proceedings; data from National Agriculture and Food Centre – Research Institute of Agricultural and Food Economics http://www.vuepp.sk/04_komodity.htm

Note: CZ-Czech Republic, PL-Poland, H-Hungary

4. Conclusion

The situation is unfavourable relating to income statement of milk producers. Sample of milk producers have recorded loss since 2009. In general, an increase in milk yield has consequences in a rise of costs of milk production. Cost of feeding contributes highest to total cost of milk. Situation on the feed market has had the main impact on the costs of milk production and furthermore resulted in the decrease in returns. The number of associations purchasing raw cow milk from producers has increased since 2007. There were 15 associations registered at the end of 2007 and 25 associations at the end of 2011. The same positive trend was experienced in case of other business organizations. On the other hand, the number of processors slightly decreased from 25 in 2007 to 23 at the end of 2011. Concerning the level of retail margin shows the strong position of retailers in the supply chain of cow milk and their ability to realize increases in margins even during times of increasing costs and the economic recession

The dairy sector represents one of the most important branches of agriculture and food industry in Slovak Republic. However, the sector is losing its scope continuously, also production is diminishing and moreover it deals with economic problems (a drop in prices paid to producers and the increase in the cost of animal feeding etc.) Therefore adequate support regulations must be done in order to protect and stabilize industry and regain its competitiveness. The production of milk belongs to the prospective sectors of the agriculture in Slovak Republic, mainly due to the natural conditions, extraordinary suitable for breeding of dairy cows thus it is crucial to restrain a decreasing trend in breeding of dairy cows.

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Education for Sustainable Development and Global Citizenship in the Current Globalized World

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Abstract

The contemporary world is deeply globalized and its interconnectedness is still more visible in all spheres of life. Therefore, also the educational systems in this high level of globalization have to answer many new challenges and prepare people adequately for responsible life anywhere in the world, not excluding also the managerial sphere. World faces number of threats and it is not possible to miss global and development issues in any kind of education today. Therefore, the aim of this article is to point out the importance of the issues of sustainable development and global citizenship, which are so important for sustainability of the Earth, in preparing future graduates. The main aim will be focused on the analysis of the necessity of implementation of these issues and knowledge into the education for future managerial and other spheres, which actively affect the current global environment in many ways. Through the analysis of selected surveys this article will also examine the relationship of people to the education for sustainable development and global citizenship, and according to the results it will try to find out whether the proper implementation of these issues and bringing the principles of environmental, economic, and social sustainability has the ability to improve global environment and make it more sustainable.

Keywords: sustainable development, global citizenship, education, globalization, managerial sphere

JEL Classification: Q01, F01, I25, F55

1. Introduction

Sustainable development and global citizenship are phenomena which can be met during recent years still more often. These concepts have been spreading mainly through various non-governmental institutions and transnational organizations and with the deepening global problems they have been acquiring still bigger importance.

Current world is deeply globalized and this interconnectedness not only shows the big differences among individual countries (mainly among developed and developing countries), but it also deepens them and endanger sustainability of the world. Therefore, the international organizations have to face many new issues and take responsible, active and also effective attitudes toward them. The main goal of today's international system is to do everything for ensuring sustainable development among countries and also inside the countries. Each person has to understand own part of responsibility which he/she has toward the Earth, because everyone is an unsubstitutable part of it. People must understand that they do not belong only to some particular nation, but they belong also to a big global society. This belonging is even more visible today when all parts of the world are so interconnected and also ordinary people have much easier approach to the things in other parts of the world. We can say that every person has quite big ability and opportunity to influence the world and those are higher than any time before. The biggest problem is that people are mostly not sufficiently informed about their responsibility and opportunities, and even about individual global problems that are harming the world and that these problems matters to them too. Therefore, the national

education systems of the current world have a unique and huge responsibility to ensure really quality and full-valued education which highlights global issues in parallel with the necessity for sustainable development and global citizenship education. So that students will be able to understand the interconnectedness of their lives with these problems and will be able to make an informed and responsible choice of what attitude they will take toward these problems. Sustainable development can be reached only through changing people's attitude towards the world and environment.

Issue of sustainable development belongs among very frequented one today and the phenomenon of global citizenship is still more often mentioned in connection with ensuring world sustainability. These concepts have very much in common and should be implemented across the education systems for reaching best results in students' attitudes and future actions. Education systems have to ensure that every person will be involved in these actions (not only the governments or organizations). Therefore, the educators have been gradually adopting new approach in the education which can support these issues as well as students' responsibility toward the world, and spread the education for sustainable development and global citizenship, which should bring the principles of environmental, economic and social sustainability.

These issues and necessity for this education are currently visible in all spheres of life, not excluding the managerial one. The aim of this paper is therefore to point out the importance of the phenomena of sustainable development and global citizenship in preparing future graduates with focusing on the analysis of the necessity of implementation of these issues and knowledge into the future managerial and other spheres, which can actively affect the current global environment in many ways. Through the analysis of selected surveys aimed at the education for sustainable development and global citizenship this article will also examine the relationship of people, institutions and countries to this innovative approach in the education. According to the results the paper will try to find out whether the proper implementation of these issues into the education has the ability to improve global environment and make it more sustainable.

2. Importance of sustainable development in the current globalized world and phenomena that support it

The terms sustainable development and global citizenship are widely used in all spheres of life and it is important to promote them across all spheres of life. Both have many definitions and there is no unified insight onto them, but it is not possible to miss them either in the current education as well as in the education of future managers who will affect and create the global environment variously. It is necessary to teach them what these approaches are about, try to reach that they will be able to adopt these attitudes and in their future practice they will act as responsible global citizens with supporting sustainable development in their sphere of acting.

2.1 Insight on the concept of sustainable development

The very concept of sustainable development has begun to develop since the 1970s. At first, in terms of lasting sustainability, as a part of social development that respects natural conditions. Later, in terms of development, as a process of change towards harmonized use of natural resources, direction of investments, orientation of technological development and institutional changes, and towards increasing potential of satisfying human needs of present and future generations. The idea of sustainable development is considerably older and it is further developed through the literature from the field of development and environmentalism, as well as through many important international conferences, which solve related problems at the highest political level. Today, one of the biggest challenges for sustainable development is the globalizing world, largely marked by poverty (Elliot, 2006).

In the 1990s stronger protection of the nature values and natural resources was gradually getting into the minds of people and the environmental problems have started to be an immovable part of sustainable development concept. These problems are not only problems of the damaged environment, but they are also making people's lives more difficult (they contribute to the poverty, etc.). That is also why the term 'sustainable development' necessarily takes into account all related aspects like economic, financial, environmental, ecological and social. This vision was underlined at the international Summit in Rio de Janeiro on environment and development in 1992. It has started the series of international United Nations' (UN) conferences, which created new international development agenda.

Many documents focused on sustainable development were adopted after this summit. One of the most important was the document with Millennium development goals (MDGs)¹⁹ adopted at the Millennium Summit in 2000 by the UN. A new partnership among the nations was created with the primary goal to create sustainable place from the Earth. The document consisted from 8 goals with the deadline in 2015. However, these goals had several serious defaults which made them unrealizable (they were too general; they defined the goals, but not the way or strategy how to reach them; etc.). Despite the UN efforts MDGs were not fulfilled. However, they laid important foundations for further efforts and successes in this field and contributed to highlighting the links between global challenges, sustainability and the principle of humanism.

In 2015, the Millennium Development Goals Report stated the fact that most of the problems are still obvious also after the year 2015. There was a need to continue in the efforts to achieve sustainability. For this purpose the new Sustainable development goals (SDGs) were adopted in 2015 at the United Nations Development Summit. These 17 goals and 169 targets reflect aspirations for sustainable development of the global community, and together with the broader agenda for sustainability they go much deeper than the MDGs addressing the universal need for development that works for all people (UNDP, 2015).

Figure 1: Sustainable Development Goals



Source: Millennium Challenge Corporation, 2017

SDGs (see picture 1) present a part of the *2030 Agenda for Sustainable development* and for today they represent the highest priority in international community. They have being set to facilitate the realization of results achieved at the important summits in the economic, social and environmental area, with emphasis on sustainable development. They pick up on MDGs and dispose with closer specification. Important is also quite big support of global South

¹⁹The Millennium development goals were set as following: 1) Eradicate extreme hunger and poverty; 2) Achieve universal primary education; 3) Promote gender equality and empower women; 4) Reduce child mortality; 5) Improve maternal health; 6) Combat HIV/AIDS, Malaria and other diseases; 7) Ensure environmental sustainability; 8) Develop a global partnership for development (United Nations Foundation, 2000).

countries and the effort for removing regional inequalities. All these goals are significant in ensuring sustainable development and each is strongly connected with many problems of the Earth on which also the managerial sphere has the reach.

2. 2 Global dimension in the education for citizenship and sustainable development

There are a lot of serious problems and challenges that the world faces today, and they are not only about the dirty air, polluted water, climate change, etc. As we can see from the picture there is number of very deep and at first sight hardly visible problems mainly. But these problems gained global character and all are strongly interconnected with the problem of sustainable development of the world. Thus, the proper attention must be paid to the creation of responsible attitudes of people toward these problems. It is more than necessary to reevaluate the delimitation of citizenship context and make it more suitable for current globalized era.

Global citizenship is quite controversial concept necessarily interconnected with a high degree of abstraction. For many experts, it means some ethical claiming about universal values and supranational responsibility. For others, it is some ethos or group of moral principles and codes of behavior, and for some others it is just something like philosophy of human rights. But there are still more discussions about the global citizenship and about examining how it is possible to realize it. These discussions are so live that in many countries the education for global citizenship represents one of the main cross-cutting topics at various educational levels.

The internationalization of this education is important because it leads to the positive exchange of ideas of people who recognize and respect diversity and traditions among nations. It is often understood as something that prepare students to the work and be initiative in the context of global independence. According to this, global citizenship education refers how the mankind should be organized to show real critical issues of the current era and represent political, economic and social relations with regards to globalization context for given education.

Education has become fundamental in achieving sustainable development. Support of extensive education and awareness raising in global communities, and support of education with global dimension is therefore one of the current priorities of international community. As Andreotti states, responsible education in current 'global times' requires a deeper understanding of the social, cultural, economic and historical forces and flows that connect peoples, places, spaces and world views, and of the difficulties of intervening in complex and dynamic systems. Otherwise, educational outcomes tend to unintentionally reproduce unequal relationships between people, simplistic rationalizations of inequality, and instrumental and ethnocentric imaginaries of global citizenship, diversity and social responsibility (Andreotti, 2014). Global education and global citizenship are therefore also considered to be one of the answers to the challenges of new global economic and social environment (Svitačová & Pechočiak, 2014).

Global dimension can be understood, according to McGough & Hunt (2012), as something that connects local, national and global, so that people are aware of what impacts have their actions on others in the world. So, the global citizenship education should allow people to penetrate into the whole complex of individual global issues and to examine the links between their own lives and lives of different people, places and various issues around the world through the education. It is necessary to leave global citizenship penetrate into the school curricula because students have to understand that they are not only national citizens with some particular national identity, but that they are also a part of some global entity – that they are global citizens.

According to Bourn (2014) students of all disciplines in the current globalized era have to acquire the skills to live and work anywhere in the world, and according to UNESCO (2014) global citizenship education helps equip mainly young people with new skills and competences,

which are mostly required for the life today and helps them to increase the feeling of shared responsibility, fairness, solidarity, empathy, curiosity and respect for diversity. With this especially young people are able to reach new approaches in thinking and be critically and actively involved in the approach toward the complex of global issues and their solving. We can say that this education highlights the main features of education associated with citizenship forming in globalization context. This education represents a lifelong process with the aim to equip people with the information to understand economic, political, social and environmental processes globally, develop critical thinking and obtaining identity of global citizen, lead people to take the responsibility for their actions, and adopt values of active global citizenship (Slovak NGDO Platform, 2012). It helps people to conceive various forms of their future and roles that have in the new more just and sustainable world.

This covers also the managerial field where is the exact and wide space for global citizenship education which changes the content of education to be more relevant for the life today and for current global challenges and threats. Students should be interested in the world and know how global problems affect also the local ones in individual countries. Future graduates need to understand that global problems concern them and that everyone has the responsibility towards these problems and their solving (TASR, 2015).

Many mostly Western educational institutions gradually implement global citizenship concept into their education systems, teach students global responsibility and try to respond to the wide range of challenges, posed by globalization (Svitačová & Mravcová, 2014). But many other countries, still refuse it, because they consider it as a broaching of western values and belittlement of their traditions (TASR, 2015), or they just struggle with own problems. People are mostly not informed and they feel that they are not involved. However, the global problems are not only problems of the West and it is necessary to promote a constructive activism, train people to the progress and positive changes. Global sustainability needs global citizens, common view and basis with similar values. All this has to start at national level where the educational system has to be adapted to the world challenges and threats. The importance of this approach in the whole education system is therefore still higher because the access to the information and knowledge is the first step for improvement and change.

2.2.1 Education for sustainable development and global citizenship

Global citizenship education responds to the process of globalization, which is accompanied with contradictory qualitative changes. Thus, we can agree that one possibility how countries and individual communities can face the global issues and problems with sustainability of the world is through educating people, as well as through the implementation of new teaching concepts and educational forms. They should allow people not only to acquire the basic and common information, but also to develop their knowledge, skills and attitudes, on the basis of which they are able to understand their position in the contemporary world more easily, and to solve problems of world sustainability responsibly. Because the global citizen is generally understood as someone who identifies with being part of the world community and whose actions contribute to building this community's values and practices (Israel, 2013).

Also, the future managers should be involved in this process and see the connection of lives across the globe, see the problems of this planet and share joint responsibility for its sustainability. Especially in this sphere which can affect the world in many different positive, but also negative ways. Education for global citizenship together with the education for sustainable development create a new kind of social ideal that fills up the lacking sense of social responsibility for people and their actions.

A lot of activities have been made for last years with the aim to support spreading and institutionalization of global education, which includes both issue of sustainable development and global citizenship, with the main focus on cooperation, policy, evaluation, sharing practices and professional development, and of course with the aim to improve quality, practice and impact of this education, and expand its reach on wide audience.

Many experts therefore decided that it would be useful to connect these two parts of global education and create common Education for Sustainable Development and Global Citizenship (ESDGC) and many efforts were put into the its process and institutionalization. This education should represent significant contribution because its main aim should be to bring the principals of environmental, economic, and social sustainability into a framework of future higher education. It should give students an understanding of the impact of their choices on other people, the economy and the environment (Welsh government, 2017).

This education should develop people's skills to take action that improves quality of life now and for future generations. It highlights the relationship between power, resources and human rights. At the beginning of the 21st century we can say that thecurrent behavior of mankind is unsustainable at all levels from nations to individuals because it is producing a degraded environment, economic inequity and instability, and also social problems and estrangement. People have to achieve a better, secure future for them and their children by considering the economy, environment and society together in decision making. ESDGC should help them to achieve this goal. It should help to gain an understanding of various education systems and improve the global awareness there. It is about values and skills. It is an ethos that can be embedded, an attitude to be adopted, a value system and a way of life (Aspiration Training, 2017). ESDGC refers to enriching the educational process to consider sustainability at its core.

ESDGC is just in the process of creation, but when we are talking about global citizenship education and education for sustainable development there is a big need to integrate them into the existing subjects where possible and practical, and educate people toward them. To make this education as effective as possible it has to be created reflexively and be sensitive toward unexpected problems of the dynamic world. It is also important to present individual concepts to the students in right way because they will work with them in their future life in practice.

2. 2. 2 Sustainable development and global citizenship in managerial sphere

Globally educated and conscious managers are able to understand how their decisions and actions can influence other people and environment. Therefore, the education for sustainable development and global citizenship of future managers is so important because these people as future managers will be expected to lead their companies in a socially, economically and environmentally sustainable way.

This sphere is strongly focused on environment therefore the concept of sustainable development and global citizenship cannot be missing there. Many experts believe that managers are people whose decisions can have direct or indirect, positive but also negative impact on the integration of sustainable development and global citizenship in practice. Because of this there is even bigger need to change the education system of future managers and implement these concepts into existing curricula. Educators propose that sustainable development and global citizenship education of managers should foster awareness, understanding and concern that motivates them to take action in their personal and organizational lives that facilitate sustainable development and global citizenship behavior. The personal responsibility has to be gained here. Future managers will have a lot of responsibilities and power in their positions. Thus, the sustainable development education and adoption of

global citizenship approach is being seen as a key factor in the implementation of sustainable development in practice (Harausová & Chovancová, 2015).

In the education for sustainable development and global citizenship it is important to provide not only theoretical information, but also knowledge and skills for their application in practice. This education should be also taught by various active and participatory teaching methods (formal as well as informal) to allow students individually and actively address the problems of world protection to support their independence and reflection. The future managers will be able to implement sustainable development projects and develop sustainable development behavior in their companies. It is important to develop their personal responsibility through which future managers will contribute to sustainable development. Motivation in work will be also important for those who will be able to implement principles of sustainable development and global citizenship into practice of their companies (Harausová & Chovancová, 2015).

2. 3 Analysis of selected surveys on sustainable development and global citizenship

In this part the analysis of several surveys on sustainable development, SDGs and global citizenship will be realized with the aim to see whether the promoting of sustainable development and global citizenship is able to help improve the world environment and make this world more just and sustainable.

2.3.1 Survey on SDGs

The survey was made in November 2015 and it was sent to 2000 respondents from the DNV GL organization (Norwegian company working towards SDGs) which is dealing with sustainable development actively. It examined what SDGs mean to the employees. Just about 10% responded to the survey (203 respondents).

From the results we can mainly see that:

- Only about 38% of the respondents knew about the SDGs before they received this survey. The responses suggested that the survey encouraged others to look into the SDGs and reflect on how the goals relate to their work, company and live.
- About 59% of the respondents considered the SDGs to be relevant for their everyday work. In the question why the SDGs are relevant, many respondents mentioned the alignment of the goals with their purpose of safeguarding life, property and the environment, and their vision of global impact for a safe and sustainable future. Others clearly mentioned the link between a particular goal and their business area. Some respondents raised the link between SDGs and company's work related to resource efficiency.
- Just 17% of the respondents think that their customers are aware of the SDGs, but 47% considered that the SDGs are relevant for them.
- 92% of the respondents think the SDGs are relevant for DNV GL as a company. The most common reason was the alignment with company's purpose and vision. Another mentioned reason was business opportunities related to the goals, for example, to water and life sciences. Some respondents wrote that it is important for an organization like this to lead by example and do what they declare.
- 91% of the respondents think DNV GL should be actively engaged in the fulfilment of the SDGs (in continuing to work on projects related to the goals; expanding into new industries relevant to the SDGs; raising awareness about SDGs in the industries in which their work, etc.) (DNV GL, 2015).

2.3.2 Survey on Higher education and research for sustainable development (HESD)

The survey results were presented in November 2016 by the International Association of Universities (IAU). The aim of this survey was to examine and analyse what are the association's approaches to sustainable development, determine how IAU can exchange and enhance such initiatives and advocate for HESD worldwide. The survey was dealing with the awareness on sustainable development (SD). It had 120 respondents (97% from IAU members) and all continents were represented.

From the results we can mainly see that:

- More than 70% of the respondents answered that they are very well familiar with SDGs and also with Education for sustainable development. 58% of the respondents were very well familiar also with the Agenda 2030 for Sustainable development.
- Most respondents (84%) were connecting SD with environmental issues, but also societal (68%) and cultural (60%) issues.
- SD is being integrated within Universities, but the progress still needs to be made. About 45% adopted SD as a Whole Institution Approach, about 34% had a strategic plan related to SD and about 38% were developing some.
- Positive is that sustainability initiatives are developed in faculty level, sustainability centers, but also student organizations. More than 70% answered that SD is developed and governed mainly at university level. About 56 % had professional development programs related to SD.
- The survey found out that Universities are collaborating on SD issues especially at local and national levels. About 70% are engaged with other Higher Education Institutions (HEIs) on SD (IAU, 2016).

2.3.3 Survey on the SDGs – Synthesis of responses from UN Member State Missions

This survey was made by UN Department of Economic and Social Affairs (UN DESA) in January 2013. As part of the on-going consultations on the SDGs in October 2012 the UN DESA and the secretariat of the Rio+20 Conference distributed a questionnaire to national governments to elicit their views and suggestions on some key principles and criteria for developing a proposal for the SDGs. 57% of the respondents were from developed countries and 43% were from developing countries. The survey examined what are the priorities for future SDGs for individual surveyed countries.

From the results we can mainly see that:

- 77% of the countries consider the sustainable energy and access to energy as the highest priority. This is most visible in developed countries (94%). 74% reached food safety/nutrition/agriculture, again with domination in developed countries (91%). Third place with 70% had the water sanitation, again with domination in developed countries (91%). So, we can summarize that the priorities that are on the first places have domination in developed countries. But, there are also the priorities with domination in developing countries. It is mainly Poverty eradication/alleviation 58% (in developed countries 9%, together 30%); Education reached 46% (in developed countries 6%, together 23%), or Gender equality/Women Empowerment had 42% (in developed countries 11%, together 41%). Issues like Climate change/carbon emissions and Green economy/macroeconomic stability/debt had both 35% in developing countries, and only 9% in developed countries and 20% together.

- 70% of respondents agreed that ‘helping to balance economic, social and environmental pillars in policy making’ is considered an important use of the SDGs. Also 84% of the 61 UN countries who responded that question agreed that the goals should ‘reflect the social, economic and environmental dimensions within each SDG’.
- In the question ‘how can universal SDGs be made relevant for different levels of development’, 75% of respondents answered by having flexibility/accounting for regional/national contexts in terms of capacities and priorities/targets and indicators. Just 11% thought that by being global/universal in scope. Only 10% thought that by helping developing countries and 10% thought by being holistic.
- There is high level of agreement among all respondents that SDGs should be ‘common, but differentiated depending on country characteristics and level of development’ (77%). For developing countries it is also important to pay attention to national capacities and their own development priorities (31%).
- In the part about creating new SDGs for the developed countries, the most important idea was the need to improve the effectiveness and the environmental aspects of MDGs (89%). For developing countries responses more varied.
- In the question about the participation in the SDG process the majority of respondents agreed that a measure to make the SDG process participatory for civil society is by ‘organising international, regional and national consultations with stakeholders’ (66%). Ensuring transparency and accessibility of information through web platforms was the second most recurring proposal to strengthen stakeholder participation (59%).
- In the question what principles can underpin the development of the SDGs overall, there are three principles that most respondents identified: equity and equality (77%), environmental sustainability (72%), and human rights (69%).
- In the question how new global partnership for development should be constructed within around the SDGs many respondents did not respond. Those who did answer proposed that partnerships should be ‘built on existing commitments/ conventions/ frameworks’: 20% overall and 35% of developing countries (Stakeholder Forum, 2013).

2.3.4 Survey on Global Citizenship a growing sentiment among citizens of emerging economies

This survey represents a Global Poll from the year 2016. The results were drawn from a telephone and in-person survey of 20,823 adult citizens across 21 participating countries in total. Not all questions were asked in all countries.

From the results we can see mainly that:

- In 18 countries the respondents received the question about if they feel more like global citizens or like citizens of their countries. More than half (51%) see themselves more as global citizens than citizens of their country, against 43% who identify nationally. This was the first time that there is a global majority who leans this way. The results in 2016 were driven by strong increases since 2015 in non-OECD countries including Nigeria (73%), China (71%), Peru (70%), and India (67%). This trend is mainly in emerging economies, where people see themselves as outward looking and internationally minded. However, for example, in Germany fewer people feel like global citizens now (30%). The trend in the industrialized nations seems to be heading in the opposite direction. In these countries, the concept of global citizenship appears to have taken a serious hit after the financial crisis and the refugee crisis which started in 2015.
- But when a choice between 5 different identities was offered, about 52% define their most important identity as citizens of their country. Just 17% viewed themselves as being a world citizen, 11% as a resident of their local community, 9% identify

themselves primarily through their religion, and 8% through the race or culture. For example, Spanish are by far the most likely to identify with world citizenship (54%).

- They were also asked about the level of approval for different demographic developments changing the population of their country. Results indicate that public opinion is generally quite supportive of a number of trends shaping global society. 75% of the respondents approved of intermarriage between different races or ethnic groups, and about 63% approved of immigration from other countries (31% disapproved).
- Similar degrees of openness are observed on accepting refugees, with 62%, and 57% respectively supporting their country admitting refugees fleeing conflict generally, and mainly from Syria (Germans stand out due to the high percentage of respondents choosing “neither agree nor disagree,” or that it ‘depends’) (BBC World Service, 2016).

3. Results and Discussion

According to the analyzed surveys we can summarize that various groups were mentioned and examined. One survey was made among company dealing with sustainable development, one was made among international association of universities, another was made among international governments and the last one was made internationally among citizens.

From the first survey results we can see that although it was made on relatively small scale of people within one specific company, the results indicate that people are still very little informed about the SDGs and sustainable development, even if they work in a company focused on these issues. But all of them at the same time think that sustainable development and SDGs are important in the current world. It is important to achieve sustainability in an equitable manner. Therefore, we can see that it is really important to implement and promote these issues also in the education and make people more aware of what is going on in the world and how can every person contribute to its sustainability.

The second survey was made also in specific organization. From the results we can see that its participants also consider SDGs and sustainable development as very important for the current world. We can summarize that in comparison with previous survey they were much more informed about these issues and see as necessary to spread them among students. Thus, we think that promoting sustainable development and SDGs at schools and also universities have ability to improve students’ level of awareness and through these make them at least more responsible for their actions and sustainability of the world, too.

The third survey was concerned on developed and developing countries and their view how the SDGs should be created to make them realizable. Although the survey is quite old and it was made before adopting SDGs it brought very important results and views on various sustainable topics and their importance. Countries on the governmental level were aware that it is important to develop new goals that will be more specified and the approach will be more precise. Both developed and developing countries presented the will to form new goals and be more responsible and rigorous in their fulfilling for ensuring sustainability of the world which was the priority for all surveyed countries.

The main aim of the last survey was to examine the global citizenship attitude among people worldwide. The key finding of this survey was mainly the problem in the examining people’s opinion on global citizenship. Global citizenship is difficult and very wide concept and therefore if the survey leave it open for people to interpret it by themselves, then it could be seen very differently by individual people. This was also the problem of the analyzed survey. The result that most people identify themselves like global citizens was on the first sight very positive, but it was becoming from the fact that most respondents probably did not know what

global citizenship exactly means. Therefore, there is a strong need to implement this concept cross-sectionally into the education because people cannot be responsible global citizens if they do not know what it is about. We can also summarize that there are really few surveys on global citizenship despite the fact that it is important issue today, what can also mean that there is still not enough attention payed to this phenomenon and it's spreading among citizens of the world. This fact decelerates reaching world sustainability, too.

4. Conclusion

Global citizenship is not a subject of itself, but a way of looking at the world, the way of thinking and behaving, and it is necessarily interconnected with the sustainable development of the world. We will not able to achieve sustainable world without a change in our attitude towards the world and issues that harm it. The behavior of global citizen has to be formed by the principles of human equality, shared responsibility and a sense of mutual dependency (NCDO, 2012). This is strongly interconnected with acquiring global citizenship skills such as the ability to think critically, to create own view, to cooperate, to act responsibly, to identify with others, and to be aware of own place and role in society. Without this it is not possible to understand the need for world sustainability, and also our possibilities and duties in achieving it.

It is more than necessary to promote all this and implement education for sustainable development and global citizenship into the school curricula also in managerial study programs to make future managers aware of global issues that trouble the world and that are strongly interconnected also with their future sphere of acting. They will have to face many challenges during their future work and will have to do many decisions with an impact onto wide environment and they will have big ability and a lot of possibilities in achieving sustainable environment as well as more just and sustainable world. Thus, it is necessary to promote sufficient level of global education to form responsible, critically thinking and behaving global citizens with the knowledge of the importance of ensuring sustainability of the world. Because the proper implementation of these phenomena into the education has the ability to improve global environment and make it more sustainable.

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Consumer's perception of ethical aspects of marketing activities

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Abstract

Current long-running and dynamical global trends in the macro-environment influence marketing activities of enterprises as well as the planning and the implementation processes of marketing strategies. Marketing has always been criticized for using certain unethical practices which harm the consumer, the enterprise that uses them, and have a negative effect on the whole society. A low quality, dangerous, or otherwise inappropriate product, high prices, hard sale or misleading and deceptive marketing communication, do not have a positive influence on a customer. Therefore, there is a growing demand of the enterprises for establishing such corporate rules that will enable employees to get oriented in marketing ethic. Using market opportunities with regard to the ethical dimension of business, is a great challenge these days. Creating an ethical marketing mix is the responsibility of marketing employees. Therefore, this paper synthesizes our knowledge of the given topic, findings how the enterprises adhere or do not adhere to ethical rules and principles when creating a marketing mix, and how it is perceived by consumers.

Keywords: *ethics, ethical marketing mix, unethical marketing practice, consumer's perception*

JEL Classification: *M30, M31, M14*

1. Introduction

Neither economists nor the entrepreneurial public have a joint opinion on the significance and importance of ethical principles in economic activities. The events of previous years (in both home country and also foreign countries) have shaken the belief in the observance of ethical principles in practice. Paradoxically, they have incited an increased interest in this problem and moved the perception of entrepreneurial ethics into the category of the most significant economic topics (Nikodemska-Wolowik, 2008).

There are several reasons why to dedicate attention to ethics and entrepreneurial ethics and expand their rudiments and principles not only in the entrepreneurial sphere, but also increase the awareness of the society about these issues in general. Law is not willing to, or rather cannot resolve many problems with which entrepreneurial practice is in contact. Even though it comes to a conjunction between law and ethics, and ethical and legal norms mutually intertwine, law will always represent only a minimum amount of morality and ethics (Minarova, 2013). Many businesses act according to the principle „what is not forbidden, is allowed“, and although a certain type of behaviour is within the bounds of law, at the same time it may be a matter of immoral behaviour.

Entrepreneurial subjects are constantly getting under a larger amount of pressure in their environment. They produce and offer products under the conditions of a constantly tougher competition and use all possible means to get to know their customers better and to flawlessly satisfy their needs and desires (Dedkova, Honzakova and Myslivcova, 2011). Their practices are regularly criticized, because marketing decision making often represents a difficult ethical

dilemma. It is a matter of complex situations, with regards to the fact that in some cases standard marketing practice and unethical behaviour cannot be strictly separated. Besides, some marketing practices are evidently unethical, or almost on the edge of law.

The position and significance of ethics in marketing has essentially been discussed since its origin at the beginning of the 20th century. On one hand, the first discussions have aroused complaints of consumers on various debatable marketing practices (false advertising, misleading the consumers, far too high prices), and on the other hand lack of interest of providers to solve the given problems. Marketing is plentifully and often criticized. A part of the critique is justified, another part, not at all. Critiques claim that some marketing activities threaten certain consumers, society as a whole but also other business companies (Kotler & Armstrong, 2004).

Most authors (Pride & Ferrel, 1989; Smith & Quelch, 1993; Remisova, 2000) depend on the generally accepted ethical principles of behaviour in their definitions of marketing ethics, as are honesty, truthfulness, responsibility, fairness, conscientiousness, openness and appropriateness. These principles should be valid as general ethical standards, because in the current global turbulent marketing environment, ethical and responsible behaviour is one of the presumptions of strength, prosperity, and long-term survival of the company. Several benefits for a company come as a result of ethical decision making – formation and strengthening of a positive image of a company, strengthening the satisfaction of customers, strengthening the loyalty of employees, decrease of transactional expenses, better economical results, cultivation of entrepreneurial environment (f. e. Davis, 1994; Dytrt, 2006; Putnova & Seknicka, 2007; Musova, 2013; Mala, 2014). An effective and ethical marketing program should optimally combine all „5P” of marketing ethics – purpose, pride, patience, persistence, and perspective, demonstrated Hanulakova (1996).

The interest of entrepreneurial subjects in establishing business rules, which will help employees in marketing orient in the issues of marketing ethics, is at present increasing. Naturally, even the best regulation (e.g. in the form of a codex) will not solve the complex ethical problem, which individual managers or whole companies encounter (Singhapakdi, Vittel and Kraft, 1996). There are a couple principles, from which marketing employees can choose. According to one of them, the free market, and a valid legislation can solve ethical dilemmas. A second, more farsighted principle, does not leave the responsibility in the hands of the system, but bestows it directly into the hands of individual entrepreneurial subjects and managers. Every business should devise their own concept of socially responsible marketing and ethical behaviour. In accordance with the concept, marketers must keep in mind more than just the legislation and legal regulations. They do not follow the principle „I do, what is allowed”, but rather follow their own rules, which are based on personal integrity, on the company’s „conscience” and on long-term interest in the well-being of the consumer. Companies, which will be able to create and offer customers new values in a socially responsible way, will achieve the highest goals.

Marketing mix is among the basic marketing terms, without which it would not be possible to effectively apply marketing in practice. Providers influence demand for their products through marketing mix. As Poliacikova (2007) presented in contrast with other marketing constants, the variables of marketing mix are influence able and controllable, even though every one of them to a different degree and a different speed of effect. Through appropriate product modification, price, communication activities or distribution channel it is possible to achieve a higher customer satisfaction and gain benefits in a competitive environment at the same time.

Just as ethics must become a part of work of marketing managers, so it also must be included in every tool of marketing mix. It is not possible to name all ethical requirements, which can be encountered in the process of marketers' decision making in the context of creation of marketing mix. In product policy, responsible marketing employees must deal with questions of quality and safety of products, warranties, planned product aging, false packaging and labelling, negative influences of the product on natural environment (Vokounova, Korcokova and Hasprova, 2013; Majerova & Krizanova, 2015). Among price problems, we encounter price manipulation, controversial price strategies (loss-leader pricing, price discrimination), speculative price increasing and decreasing. Despite the significance of distribution channels, companies dedicate very little attention to them, which can result in the creation of conflicts and competitive problems. One of the options of their elimination, or rather their solution, is a more consistent integration of ethics into the relations between individual members of the distribution channel (Musova, 2013). In marketing communication, we encounter ethically disputable practices above all in advertisement, but it is also used by sales promotion, person-to-person selling, direct marketing or digital marketing (Svec, Olsovska and Mura, 2015). Several of the given problems were also subjects of our primary research, of which partial results we will present in the next part of the article.

2. Data and Methods

The purpose of this article is to research ethical aspects of marketing decision making with an emphasis on individual tools of marketing mix, which are most often objects of critique from the point of view of adhering to ethical principles and values. After a theoretical allocation of the objective problematic we will focus on presenting opinions and perception of consumers on chosen unethical practices connected with basic tools of marketing mix.

During our research, we base off of available secondary sources, domestic and foreign authors, who deal with the problematic of ethical aspects of marketing. During their process we use methods corresponding to the purpose of the research (analytical-synthetic, inductive-deductive, analogy, generalization and comparison).

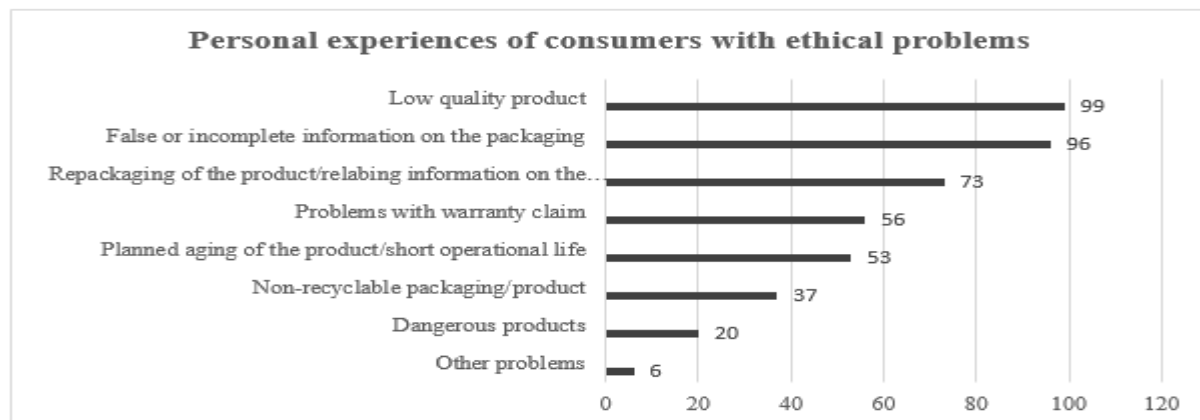
Primary data are the result of own research, in which we have focused on the opinions of Slovak consumers on the topic of observance, or rather violation of ethical values and rules when it comes to implementation of marketing activities in Slovak Republic. Through a questionnaire, we found out, how consumers view the chosen unethical marketing practices and in what way they react to them when purchasing. The sample size of the research is 164 adult respondents (102 women, 62 men). The largest portion of respondents (48%) were up to 25 years old. More than half of them had high school education, 36% of respondents have finished university-level studies. We present the chosen results in the following part.

3. Results and Discussion

We have focused on chosen general opinions of consumers on the ethics in business and the influence of marketing on their decision making in the introduction. From the perspective of the given topic we have found out significant deficiency – only about 14% of the respondents has stated, that they know the content and deal with it in practice (in the context of appraising the observance of ethical principles in various activities). Almost a half had no more detailed information about the problem. We have also asked whether marketing influences our respondents. More than a half (52%) has stated, that marketing does not influence them, but sometimes they react to some stimulus. Marketing definitely influences nearly 20% of the respondents. Almost 8% claimed, that marketing does not influence them whatsoever.

After that, we have asked the respondents on their personal experience with unethical practices of the providers, which we have categorized according to individual marketing tools, while the respondents could check multiple choices. Concerning products, consumers most often mentioned low quality of the product and false or incomplete information on the packaging of the products. The results are shown in the following graph (Figure 1).

Figure 1: Perception of ethical problems related to products



Source: Own processing of research results

Respondents have met with the above mentioned ethical problems (they had the option to provide several answers) mostly while shopping grocery products (72% of respondents), textile and shoes (47%) and electronics (almost 35%). It was followed by drugstore and cosmetics goods (28%), medicine and sanitarian tools (20%), furniture (almost 12%) and services (5%).

Price, from the perspective of marketing theory, is generally considered in accordance with the requirements of the market (consumers perspective of product value) and secondly with the satisfaction of requirements of the producer, or the seller. In a practical field this does not have to hold true. From the point of view of ethics we can consider price to be the most complex researchable tool of marketing mix. We have asked the respondents in our research about the problems, which they encounter in relation with price. The most dominant answers were psychological prices, differences in communicated prices and prices that were actually charged, fake discounts, lack of price tag on the product. Complete results are represented in the following graph (Figure 2).

Figure 2: Price practices impairing the consumer



Source: Own processing of results of research

Consumers encounter unethical practices most often in hypermarkets and supermarkets – as much as 75% of respondents have stated that in these sales locations they are often price manipulated. Following this were shopping centres and smaller businesses.

While evaluating ethics in marketing communication, respondents have divided their answers between individual communicational tools. Respondents have most frequently encountered fraud and promoting unreal characteristics of products in advertisements. The second most frequent occurring problem were fictional chances of winning a contest with no real chance of winning (sales promotion). The subsequent problems were promotion of unreal expectations of products, advertisement with inappropriate content, inappropriate behaviour of sellers in personal sales and negative influence of advertisements on children.

Consumers have presented their various approaches from the point of view of complex perception of marketing communication (Table 1).

Table 1: Approach of consumers to marketing communication

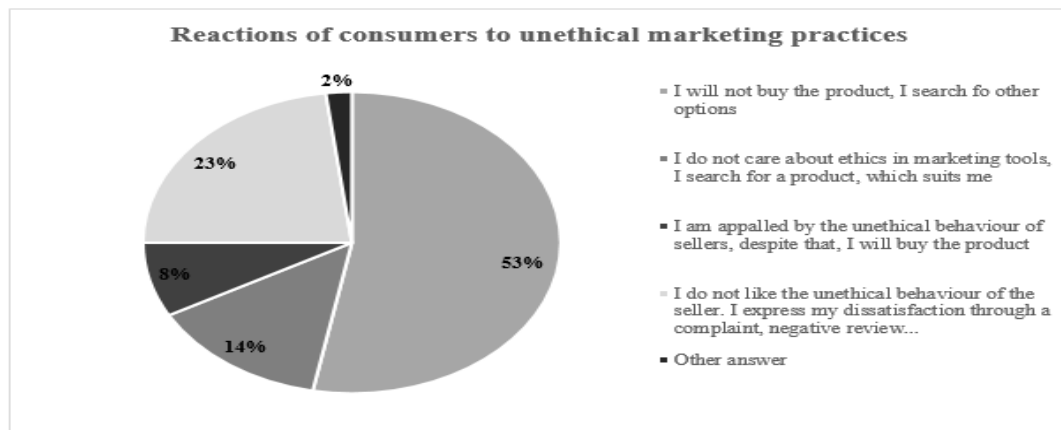
Approach of consumers to marketing communication	
Communication is necessary, it informs us about the properties of the product and the prices, it is worthwhile to watch it, I always find something interesting	21 %
I have no problem with the method and content of communication, I have a neutral approach towards it	27,4 %
Advertisements (or other communicational tools) entertain me, some interest me, but they do not influence my purchases	32,9 %
I cannot stand them (especially advertisements), they bombard me from all sides, annoy me	15,9 %
Other answer	2,5 %

Source: Own processing of results of research

The most scope for manipulating and influencing the consumer, according to our respondents, is visible in television commercials, advertisements in the radio, printed media and on social networks. It is a little bit less possible to manipulate them in personal sale, door to door selling or through telemarketing. Our respondents consider pensioners as the most endangered group (27%), followed by people with low level education (21%) and children (14%). A relatively large part of the respondents (23%) has expressed themselves, that we are all endangered equally.

We were also interested in what way consumers react in the case that they encounter unethical practices while purchasing. More than a half has expressed that if they encounter unethical behaviour, they do not buy the product and try to find a different alternative to satisfy their needs. Almost a quarter of respondents express their dissatisfaction actively, through complaints, submitting a warranty claim or writing an adequate review. Surprisingly, 14% do not care about unethical marketing practices, they are only interested in satisfying their own need without regards to the method. Only a small part has stated, that they buy the product despite that they register unethical behaviour. The answers are shown in the following picture (Figure 3).

Figure 3: Reactions of consumers to unethical marketing practices



Source: Own processing of results of research

At the end we have asked the respondents, whether they have been influenced in any way by our questions, whether they will pay more attention to this problematic, whether they will think about the ethical/unethical marketing practices during future purchases. Almost a half has stated, that thanks to our research they had to think deeper about the significance of ethics in marketing. A quarter plans to be more perceptive in the future about marketing practices with regards to their ethical extent. For 15% of the respondents some information was surprising and 7% were not interested in the slightest in the problematic of ethics in marketing.

The presented results of the research have shown us that even though consumers encounter unethical marketing practices daily, a large part of them does not pay them enough attention. Consumers lack the information about their basic consumer rights. When they do not know them, they are not able to apply them with regards to irresponsible providers. In the end, they accept the inadequate and unethical methods from the side of their partners through their passive approach. Many consumers do not address their problems and dissatisfaction and express their dissatisfaction through spreading negative information about the unethical behaviour of a business, which in the end can cause harm to the goodwill of the business and its products.

4. Conclusion

To satisfy the needs of customers and to ensure competitiveness and success, businesses utilize an optimally constructed marketing mix and its tools. The creation of marketing mix is in the hands of marketing employees, therefore it depends on their ethical and responsible behaviour, whether even individual marketing tools will contain ethical depth. Ethical marketing behaviour of businesses is a reaction to the increased pressure of more informed, educated and demanding consumers, who are less and less willing to purchase low quality and dangerous products for too high prices, accepting false information from marketing communication or accept such methods of production and distribution, which do not consider environmental requirements. Consumers express their responsibility for themselves and their surroundings by becoming aware of their rightful demands and by assertively demanding the acceptance of them from the side of the providers – producers, sellers, and service providers.

However, the results of our research have confirmed the passivity in several areas of a part of consumers and their indifference towards unethical and irresponsible behaviour of businesses. Insufficiently educated and informed consumers, who do not know their rights and do not know how to actively assert them and without complaint accept even debatable business practices, cannot be equal partners of businesses. More responsibility of consumers leads to a larger

responsibility of businesses and in the end yields effects to both participants of the market, as well as to the whole society.

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Perception of the quality in rural tourism

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Abstract:

The review paper brings an information about rural tourism in the Czech Republic and about its component wine tourism. It is because the rural tourism in the Czech Republic forms a large part of tourism. The most of the bed places are in the rural areas (in the Czech Republic there were 715 014 bed places in total in 2015, 430 374 of them were in rural areas, Eurostat, 2017). Rural tourism is a good way to restore rural areas, whose economic potential is declining. To support tourism here work organizations such as European Centre for Ecology and Tourism (ECEAT), The Association of Rural Tourism and The National Wine Centre. A very important theme is the quality in the rural destinations, because in the Czech Republic is not any certification of this type of destination. In the researches quality factors are examined from the perspective of perception visitor destination.

Key words: rural destination, wine tourism, organizations in rural tourism, quality destination

JEL classification: Z32

1. Rural Tourism

According to OECD (1994) it is hard to define rural tourism, but it is clear that it is a form of tourism that takes place in the countryside. With this agree Bran et al. (2010), that it is difficult to define rural tourism because it depends on many factors. But they said that rural tourism is a reaction on a stress and industrialisation of the towns. OECD (1994) define rural tourism as tourism based on the many activities typical for him, mainly: staying on a farm and do there some typical activities, instead of urban tourism it associated with staying in the nature – do sports or some educational trips. Rural tourism has some specific forms. Meler (2015) define specific forms of rural tourism:

- agrotourism,
- outdoor activities
- ecotourism
- wine tourism
- cultural tourism
- adventure tourism
- excursion tourism

Šimková (2008) said that rural tourism is based on sustainable principles, natural beauty, traditions and customs and cultural values. According to her, rural tourism is a chance for pure Czech regions to develop. Rural tourism is beneficial for the economy of this types of areas. Ryglová et al. (2010) specified this benefits:

- It helps to preserve and restore the countryside and its traditions
- Creates new jobs
- Promotes entrepreneurship

- For cities contributes to the development of capital that can be used for infrastructure development
- Generates tax revenues.

Rural tourism is a way to restore the country life in the Czech Republic, due to the disappearance of larger farm and agriculture units falls. Privitera (2010) indicated that the development potential of rural tourism can be a wine tourism. It is possible in the Czech Republic because there is large wine region in South Moravia and also in Central Bohemia (Litoměřice and Mělník).

1.1 Wine Tourism

Part of European cultural heritage and a traditional part of agriculture is with no doubts viti/vini culture. Traditional wine regions such as France, Spain, Italy, Austria or Germany are at the top of the world not only in a sole product quality but as well the entire viticulture, wine making and wine business. Among growing competition of cheaper wines imported from so called New world regions (South Africa, South America, Australia) together with changes in style of life of Europeans the need for coming up with new additional products or services is fostering. And wine tourism is a common part of this effort. As Croce and Perri (2010) describe general changes in quality shifted upwards in Europe together with insured incomes of some people lead to higher demands on free time. Mitchell and Hall (2000, 2006) highlight that wine and gastro tourist very often appreciate origin of products, genus loci and opportunities of direct contact with producers.

1.1.1 Types of wine tourism

Wine tourism is a part of rural tourism and covers activities of visitors to typical countryside areas that are connected with presence of vineyards and producers of wine (Hall, 2000).

National wine centrum of the Czech Republic recognises following destinations of wine tourism:

Winery – wine producer registred by authority of Wine fund of The Czech Republic that offers cellar door sales. Such producer is also able to provide to visitors tours in vineyrd and cellar tours.

Wine cellars – facilities that offer on premise wine sales of own or other producers' wine.

Wine shops – offers sales of local wine. Wine shop also provides information connected with wine, wineries and wine tourism and other program.

Wine restaurant – A restaurant offers portfolio of quality - typical local – meals and sufficient wine offer.

Accomodation with wine themes – Rural and also urban type of accommodation that is directly connected with wine cellar, winery, wine restaurant, etc.

Wine routes – interconnect main wine regions and wine destinations.

Wine harvest feast – typically held in centers of wine regions on a regular basis. Weekend events offering cultural program.

Wine exhibitions – connected with selecting best wines of the region/type, etc.

Expositions and museums with wine topics – local, temporarily or stable.

Seminars and courses – educational programs, workshops for both public and professionals

2. Organizations in rural tourism

In the Czech Republic is a large number of organizations, which support the development of tourism. In the unwritten hierarchy is the highest-ranking organization Ministry of Regional Development. Under the Ministry is the marketing agency CzechTourism, what present Czech Republic as a destination all around the world and also supports domestic tourism. In rural tourism in Czech Republic acts some smaller associations, which coordinate activities in the areas, help villages and business to develop. This article deals about ECEAT, Association of Rural Tourism, The National Wine Center.

2.1 ECEAT

European Centre for Ecological and Agricultural Tourism was founded in 1993 in The Netherlands. It deals with sustainable tourism and rural tourism. In The Czech Republic it has been operating since 1994 (eceat.cz, © 2008). It helps with realizing tourism projects for cities and businesses. They created a project called Heritage Trails, which supports local gastronomy in the Czech Republic – mainly in two regions South Moravia and Vysočina. ECEAT is a partner of Centrum EDEN in Bystřice nad Pernštejnem – it is an educational center based on the principles of ecology (visitors can try to make a beer, ride on a horse etc.). ECEAT also have their own quality label for rural accommodation.

2.2 The Association of Rural Tourism

The Association of Rural Tourism brings together businesses in this type of area. As all associations it also promotes the interests of its members, carries out accommodation certification, do monitoring of quality standards of accommodation capacities, helps with promoting quality rural accommodation (Svaz venkovské turistiky, 2016). Their main project are Holidays in the countryside, which farms and other types of accommodation on rural areas. Visit can be searched by type of accommodation, activities in the countryside or the type of certification (ECEAT certification, Baby Friendly certification etc.). The web page is in five language mutations.

2.3 National Wine Centre and Quality of Wine Tourism Destinations

Since 2008 wine tourism destinations are possible to be certified by authority supervising wine life in The Czech Republic. National wine centre is an organisation whose main goal is to promote and support domestic wines and related activities. Inspired by neighbour Austrian wine region Weinviertel National Wine Centre came together with Nadace Partnerství (another non profit organisation that is active in wine tourism) with idea of Wine Tourism destinations certification of quality. The certification aim is to support growth of quality in wine tourism services by its standardization and following monitoring.

3. Quality in tourism

Quality as a concept is difficult to define. There are many approaches to quality. Kotlers' et al. (2007) definition is that „*quality is a sum of the elements and characteristics of the product or service which create the ability to satisfy the needs expressed or implied*“ Kosar and Kosar (2012) perceived importance of the concept of quality as something positive. Quality is associated with the activity that leads to continuous improvement. Křížek and Neufus (2014) summarize quality as „*satisfying customer expectations*“. According to Black and Crabtree (2007) is quality a main factor of success, but tourists usually changed words quality and luxury. It has the similar meaning for theme and it also connected with size of the bed or with number of restaurants in the hotel. By Jakubíková (2012) quality depends on the cooperation of all those

involved in tourism. Further specifies two approaches to quality evaluation, „*result assessment and evaluation process facilities and access*“.

Quality is very often evaluated in destinations. It is important to note that the assessment of the quality depends on the customer and it is very subjective (Hui and Kol, 2008). Destination quality is usually assessed from the services point of view. The most common instrument for measuring quality is model SERVQUAL. But the destination quality is not only about services. It is appropriate to examine the quality factors that are important to visitors, such as the research from Vajčnerová et al. (2016).

3.1 Quality perception and satisfaction in tourism services in CEE

The topic quality, satisfaction and its relation to and influence on customer/visitor loyalty has been subject to a number of researches. Tourist satisfaction has been measured and assessed by a variety of tools – namely overall satisfaction, performance, expectation, positive recommendation, etc. (Yoon and Uysal 2005). The most common used model considers satisfaction to be a difference between quality perceived and quality expected. Here some researchers (Chi and Qu 2008) point out loyalty to be a better predictor of actual behaviour compared to satisfaction. Kozak (2001) claims that level of satisfaction is one of the most dominant variables in explaining revisit intention in destination tourism. In today's highly competitive business environment delivering high quality service and creating superior customer value can result in achieving high customer satisfaction, thus affecting the firm's corporate image, and ultimately leading to consumer retention (Hu and al. 2009).

From the studies focused on Central and Eastern Europe. As per research conducted by Švec and col. (2012) succeeded to identify four factors of the perception of quality of services provided in accommodation facilities (accommodation and catering). According to results of this study age appeared to be an important criterion for the evaluation of the quality of offered services as the differences in the quality perception among particular age groups were proved for three of four identified factors of the quality perception. The identified 4 factors were:

- environment of the accommodation establishment
- hygiene in accommodation establishment
- service in the catering part of the establishment
- quality of the meals

The duration of stay as well as the gender of the respondents influences the quality of perception only in the perception of the "quality of meal" factor. Compared to the duration of stay, the repetition of the stay is a considerably important factor in causing the variability of the answers on the rate of the quality perception. The purpose of travel was also proven to be a criterion affecting the rate of the quality perception of the first three factors, whereas the impact of the criterion "client's travel companionship" was proven in case of the first and third factor.

According to Dmitrič and Žabkar (2010) perceived tourism supply quality is crucial for destination's competitive advantage.

The limitation and challenges come out by the implementation of above researches' outcomes when meeting the specifications of the area of Central and Eastern Europe.

4. Conclusions

The rural tourism is an important form of tourism, which has a high economic potential in rural areas. One of the ways that can help the development rural areas is wine tourism. Czech Republic has sufficient amenities destinations for development in this areas. Likewise, there

are several organizations that can contribute to this development, but it is necessary to make more researches for better defining quality and their perception.

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Ecological agriculture in Slovak Republic

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Abstract

Apart from the production function the agriculture fulfils also other functions, including the function of the sustainable development. The traditional conventional agriculture pollutes considerably the environment and causes the undesirable climatic changes. One of the possible alternatives of the conventional agriculture is the ecological agriculture as a way to maintain the sustainable development of the country. The ecological agriculture is the environmentally friendly system and it is based on the principle of the return to the nature and production of the healthy and high quality bio-food. The development of the ecological agriculture in Slovak Republic is influenced by several negative factors, therefore it is being developed slowly.

Keywords: sustainability, ecological agriculture, farm land, farm animals

JEL Classification: Q15

1. Introduction

Agriculture ranks among the oldest human activities and it belongs to the primary sectors of economy of any country. Agriculture has several functions, however, its substantial function is to secure the sufficient amount of quality and healthy foodstuff for the inhabitants. Apart from the production function it also fulfil the non-production functions, predominantly social, landscape forming and ecological function. The conception of the multifunction agriculture creates the foundation of the executed reforms of the Common Agricultural Policy of EU (Horská et al., 2013).

The agricultural basic production has its own uniqueness which is characterized by the manipulation with the living organisms in both plant and animal productions. The managers should have command of the basics of biological processes, know the particularities of the market with agricultural commodities, utilize the new methods of management and at the same time be flexible in the business environment under the conditions of globalization (Horská et al., 2008).

Agriculture has a significant impact on the environment. This impact can be positive or negative. The conception of the social marketing in agriculture emphasises the necessity to preserve the biodiversity of the whole ecosystem for the future generations. The notions of socially responsible entrepreneurship, sustainable development, ecological agriculture, green economy, green growth or green marketing are becoming more and more important. All of these forms of economy should not only achieve the economic growth but also become sustainable. The sustainable development should provide the basic necessities of life for the present and future generations, and at the same time it should not decrease the natural diversity and preserve the natural functions of ecosystems. It should also be socially equitable and its environmental and social benefits have priority over the economic benefits.

Healthy lifestyle, which also includes food with a high proportion of fruit and vegetables, raises people's interest in organic farming and information about its final products. The consumption of fruit and vegetables brings into the human body biologically active substances that affect favorably the health of consumers (Kozelová a kol., 2015).

The sustainable marketing is closely related to the green and ecological or environmental marketing. It emphasises the sustainable growth of society. The sustainable orientation in marketing can have the form of ecological orientation which stresses the fact of complying with the ecological limits that the planet offers and holding the need without the compromises of ecosystem resources and their ability to continue differentiation of ecosystematic services (Paluchová & Prokeínová, 2013).

One of the forms of securing the sustainable development in agriculture is the ecological agriculture. The emphasis on the environmental aspects of agriculture is evident also in the Common Agricultural Policy of EU for the years 2014 – 2020.

2. Data and Methods

In our paper we deal with the evaluation of the selected indicators of the ecological agriculture in Slovak Republic. We monitor the development of area of agricultural land with the ecological cultivation, its proportion of the total agricultural land, the number of farms using the ecological farming and the average area of a farm in 1993 – 2015. We also indicate the amount of subsidies for the ecological agriculture from the Rural Development Programme in the period of 2014 - 2020. In the graphic form is presented the area of ecologically cultivated agricultural land according to the type of ground and condition of farm animals in the ecological agriculture in 2015.

In the paper we used the methods of analysis, sythesis, comparison and simple mathematical and statistical methods. We received the required data from the quoted external sources, in particular the Central Control and Testing Institute in Agriculture, the Green Report of the Ministry of Agriculture and Rural Development and the Rural Development Programme for the period of 2014 - 2020.

3. Results and Discussion

Agriculture as one of the oldest human activities can be carried out in the different ways. The traditional agriculture tries to increase continuously production by growing intensity, therefore it ranks among the considerable contaminators of the environment. It can cause the decrease and depletion of agricultural land, the reduction and loss of biological biodiversity, the emissions of greenhouse gases, the waste formation and water pollution by nitrates and pesticides. The ecological agriculture is much more environmentally-friendly and it does not bring into the environment the foreign substances in the form of different chemicals. The plant and animal protection is carried out biologically, or mechanically. The heavy mechanisms are not being used, the healthy condition of agricultural soil is secured by mulching and green fertilizing. The ecological agriculture requires more human labour, it utilizes maximally the local resources and raw materials. The usage of the genetically modified organisms is completely forbidden. The principal objective of the ecological agriculture is the production and supplying the population by healthy, fresh and tasty foodstuff, next, it is the preservation and improvement of long-term natural fertility of soil, the creation of conditions for natural animal breeding, the rational usage of the natural resources and maintaining balance in the natural environment. The core of the ecological agriculture can be expressed by its central idea, its motto: “healthy soil, healthy plants and animals, healthy people“. At the same time the ecological agriculture contributes to maintainig the balanced cultural country and creates the

prerequisites for the successful rural development. The ecological agriculture can be implemented in both small and big farms.

The ecological agriculture in Slovak Republic does not have a long history. The first agricultural enterprises, which cultivated soil by the ecological system, were founded in the 90-s of last century. In 1995 the Ministry of Agriculture of the Slovak Republic passed *The Conception of Organic Agriculture in Slovak Republic*. This fundamental document determined the principal tendency of the ecological agriculture in the horizon to 2010 and it accepted the set of measures for its realization. Subsequently, in 1998 the *Law of the National Council of SR No. 224/1998 of the Collection of Laws about the ecological agriculture* was passed putting into practice the measures of *the White book* in accordance with the EU legislation. From this period most of the ecological subjects in agriculture began to consort in the company NATURAL ALIMENTARIA, which was accepted as a member of IFOAM in 1992. These enterprises completed the period of conversion in 1994 and the Ministry of Agriculture of the Slovak Republic awarded them by the certificate which allows the producers to label their production as “biofood“. Until 2003 the certification institution was the Central Control and Testing Institute in Agriculture. The amendment to *the Law about the ecological agriculture and production of biofood No. 415/2002 of the Collection of Laws*, which completes the *Law No. 224/1998 about the ecological agriculture* affirmed that from the 1 January 2003 the certification organ would become the company Naturalis SK, Ltd. – the Consortium of ecological agriculture inspectors, authorized by Central Control and Testing Institute in Agriculture (Kozáková et al., 2012).

Apart from Naturalis SK, Ltd. in 2015 the certification and control of the ecological agricultural production was also carried out by the company Biokont CZ, Ltd. In spite of the fact that the some of the first implementors have already given up, nowadays the Slovak entrepreneurial subjects are highly interested in its expansion. However, this system is more demanding from the aspects of organisation, technology and legislation in comparison with the conventional system. Nowadays, the legislation related to the ecological agricultural production is specified by the Law No. 189/2009 of the Collections of Laws about the ecological agricultural production. The registration, control and other activities related to the ecological agricultural production is executed by the Department of ecological agricultural production of the Central Control and Testing Institute in Agriculture.

In the Table 1 there is indicated the development of selected indicators of the ecological agriculture in the course of the short modern history of Slovak Republic. We present the area of the ecologically cultivated soil including the areas in conversion, the proportion of this soil of the total agricultural soil, the number of farms of ecological agriculture and the average area of one farm. The total area of the ecologically cultivated soil was increased from 15, 208 hectares in 1993 to 186, 486 hectares in 2015, which means the growth of 171, 278 hectares. The highest growth was monitored between years 2010 – 2009 (31, 473 hectares), 2006 – 2005 (29, 735 hectares) and 2005 – 2004 (26, 791 hectares). The maximal decrease was recorded between 2012 – 2011 (11, 659 hectares). Similarly, there was detected the increase of proportion of the ecologically cultivated soil out of the total agricultural soil. In 1993 the proportion achieved 0.63 % and in 2015 it was 9.70 %. The ecological farming on the agricultural land represents the active form of farming for the Slovak farmers, which affirms the continuous growth of the farms of ecological farming (including conversion). The lowest number of farms emerged in the first and fourth evaluated years (39 or 33), the highest number was achieved in 2015 (552). In 2015 299 so called “pure“ biofarmers was registered in Slovak Republic, who were engaged in the crop production. The decrease was recorded with an ecological farm of the average area. This drop means 52.1 hectares per farm, which means the

decrease by 13 %. Out of the total number of the registered farmers according to the juridical form, highest was the representation of limited companies (Ltd.) - 54.5 %, followed by the individual farmers (25.9 %) and agricultural cooperatives (13.8 %).

Table 1: Development of selected indicators of ecological agriculture

Year	Area of ecologically cultivated agr. soil (ha)	Proportion of total agr.soil (%)	Number of ecological farms	Average farm area (ha)
1993	15,208	0.62	39	389.9
1994	15,557	0.64	44	353.6
1995	14,996	0.61	44	340.8
1996	17,746	0.73	33	537.8
1997	27,809	1.14	46	604.5
1998	50,615	2.07	82	617.3
1999	46,386	1.90	69	672.3
2000	58,466	2.39	88	664.4
2001	57,706	2.40	81	712.4
2002	49,999	2.05	76	657.9
2003	54,479	2.20	88	619.1
2004	65,400	2.18	131	499.2
2005	92,191	4.93	210	439.0
2006	121,956	6.42	256	476.4
2007	123,819	6.52	280	442.2
2008	136,669	7.25	349	391.6
2009	146,762	7.50	458	320.4
2010	178,235	9.23	434	410.7
2011	180,261	9.34	454	397.1
2012	168,602	8.75	471	358.0
2013	162,029	8.40	448	361.7
2014	180,365	9.39	526	342.9
2015	186,483	9.70	552	337.8
Index 15/93	12.26	15.64	14.15	0.87

Source: Authors according to data of Central Control and Testing Institute in Agriculture

The ecological agriculture ranks among the priorities of the non-project measures of the Program of rural development SR 2014-2020. The total sum of subsidies from the public financial resources into the ecological agriculture is planned to achieve € 90 mil. in the given period. This sum is divided into two sub-measures: the payments for preservation of the ecological agriculture and the payments for the conversion into the ecological agriculture. The

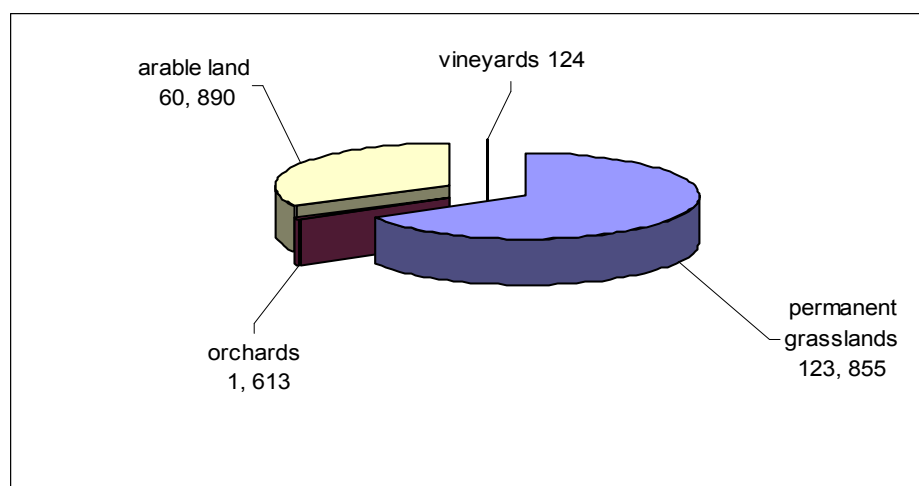
provided sums of subsidies are indicated in the Table 2. The natural persons and legal entities have to run business in the ecological agriculture for 5 years minimally. The payments for preservation of the ecological agriculture should support the enterprises which cultivate the area of agricultural soil of 135,000 hectares by ecological form. The payments for the conversion support the enterprises entering the system of the ecological agricultural production at the area of 15,000 hectares.

Table 2: Sum of subsidies for ecological agriculture from Program of rural development 2014-2020 (€·ha⁻¹)

Soil type, or cultivated crop	Sustainment EA	Conversion to EA
Arable soil	153	153
Vegetables, medicinal and spice plants	529	529
Potatoes	290	290
Orchards intensive – producing fruit	671	671
Orchards intensive – young	420	420
Orchards intensive – other	330	330
Vineyards – producing grapes	671	671
Vineyards – young	420	420
Permanent grasslands	96	96

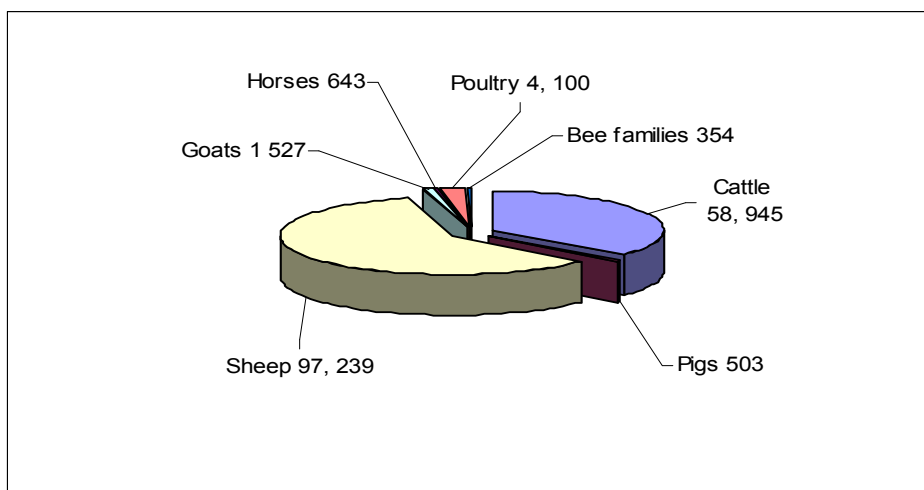
Source: Authors - according to the Program of rural development SR 2014-2020

Figure 1: Area of ecologically cultivated soil according to the type of ground in 2015 (ha)



Source: authors – according to data of Central Control and Testing Institute in Agriculture

In the Figure 1 the area of ecologically cultivated agricultural soil is illustrated according to the type of ground in 2015. Out of the total area of the ecologically cultivated agricultural land in 2015 the highest proportion was represented by the permanent grasslands 123,855 hectares (66.4 %), followed by the arable land of 60,890 hectares (32.6 %). The orchards and vineyards have a small proportion in the ecological farming, totally 1,737 hectares (0.9 %).

Figure 2: Numbers of farm animals in ecological agriculture in 2015 (pieces)

Source: authors – according to data of Central Control and Testing Institute in Agriculture

The numbers of registered animals in the system of ecological agricultural production in 2015 are indicated in the Figure 2. The number of animals is shown together, which means that the total numbers include also the animals in conversion. Sheep achieve the highest number (97,239), followed by cattle (58,945) and poultry (4,100). A lower number was represented by goats (1,527), horses (643) and pigs (503). In the ecological farming 354 colonies of bees were registered, all in the conversion.

4. Conclusion

The traditional intensive agriculture has often the negative impact on the environment. It causes the reduction and erosion of the agricultural land, diminishing and loss of the biological biodiversity, the emissions of greenhouse gases, waste formation and water pollution by nitrates and pesticides. The alternative sustainable ways of farming are becoming more and more frequent. One of the alternative forms of farming is the ecological agriculture. This form does not use the commercial fertilizers and chemical pesticides. Also, it is not possible to utilize the genetically modified organisms. The ecological agriculture is administered by the Law No. 189/2009 of the Collection of laws about the ecological agricultural production. The proportion of the ecologically cultivated agricultural land in the Slovak Republic is being constantly increased, which is evident by the growing importance of this form of farming, on the other hand, the demand for biofood is being rising. In 2015 this proportion was 10 %. We also record the growing number of the farmers of ecological agriculture. In 2015 their number achieved 552 and the average area of an ecological farm was 337.8 hectares. From the aspect of the ground type in the ecological agriculture the highest proportion is presented by the permanent grasslands (123,855 hectares) and arable land (60,890 hectares). The highest number among the farming animals in the ecological agriculture was achieved by sheep (97,239), followed by cattle (58,945).

The ecological agriculture ranks among the priorities of the Program of rural development in SR 2014 – 2020. The total sum of subsidies from the public financial resources into the ecological agriculture is planned to achieve € 90 mil. for the given period. This sum is subdivided into two sub-measures: the payments for preservation of the ecological agriculture and the payments for the conversion into the ecological agriculture

The ecological agriculture is the prospective sector of agriculture which is developing dynamically. The principal objective of the ecological agriculture is the production of the high quality and healthy foodstuff without any negative impacts on the environment. The food quality has priority over its quantity. Ultimately, a food consumer by his/her consumer behavior will decide about the development or decline of the ecological agriculture.

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Few Aspects of the Development of Rural Tourism

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Abstract

Economy has decided to improve the quality of the tourism product. Its goal is to attract the target groups that participate in rural tourism back to rural Hungary. They would like to enhance the quality of accommodations and aim to meet the needs of the "responsible rural tourist" as well. The "responsible rural tourist" aspires to have the least possible effect on the environment and culture of the visited region. The main target groups of the rural tourism are, families with children, who participate in domestic tourism, and young people related to youth tourism. The responsible visitor minimizes the damage caused by himself and with his awareness of consumption promotes the local people's welfare and shows great interest in the agrotourism and getting to know the local folk culture. Eco-labels encourage the entrepreneurs to be more mindful during their activities of the requirements of environmental, social, cultural and economic sustainability, thus present a responsible attitude towards their environment.

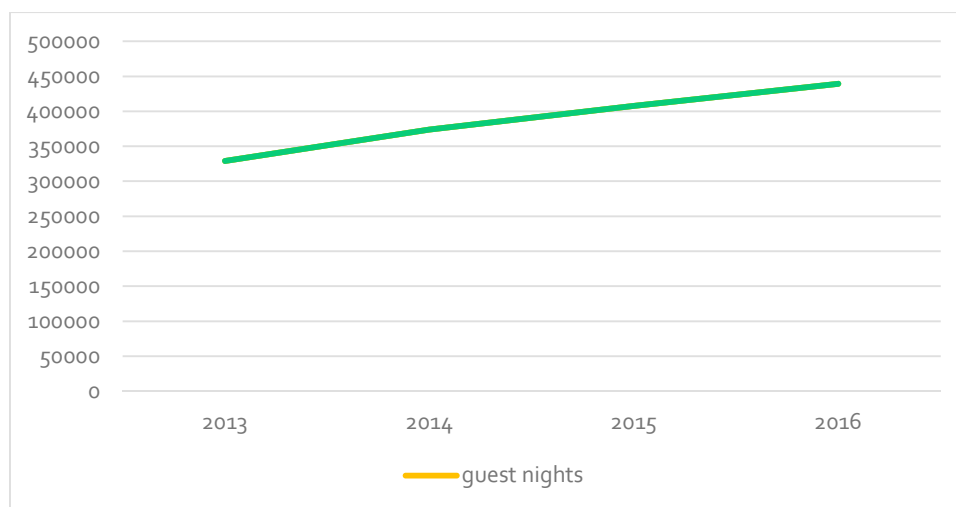
Keywords: Rural Tourism, Domestic Tourism, Aspects, Eco-Lables.

JEL Classification: Z30, Z39

1. Introduction

Since 2010, the number of guests, rooms and hosts of rural tourism have been decreasing (Figure 1.). The legal classification of accommodation establishments changed in the autumn of 2009, until the date private accommodations were categorized as other accommodations. From 2010 only those village hosts were transferred into the other category who provided rural accommodation services in settlements with a population less than 5000 thus the decline shown in the diagram of Figure 1 is not that unequivocal. We can assume that in 2010 a significant part of the hosts remained in the settlements with over 5000 people (Kovács D. 2003).

Figure 1: The number of guest nights in the rural accommodations (nights)



Source: edited by authors by Hungarian Statistical Office HSO 2015

The main target groups of the rural tourism are, families with children, who participate in domestic tourism, and young people related to youth tourism, furthermore in 2009 in Hungary, the economic and financial crisis hugely reduced these people's discretionary income. In point of motivations, it can be shown that domestic tourists do not show too much interest about the townships of Alföld. Contrarily with foreign people, besides traditional activities (the cognition of cultural-historical heritages), they are interested in hiking, get familiar with folk crafts (pottery, embroidery, hand-loom weaving) not mention the involvement of the work around the house.

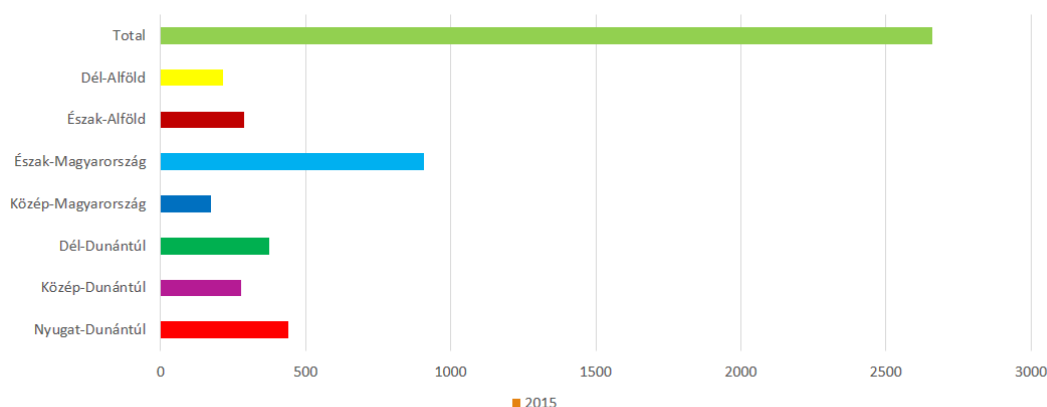
The number of nights of rural accommodations have been increasing since 2013 (figure 1.). In Hungary since 2014, rapid growth has begun in the tourism industry, if the favorable price range stays in the rural lodging and beside it could offer quality services, they could return to their lost guests.

Earlier, the tourism products disposed of positive data about the average stay per night, to increase those numbers again, the modernization and the quality reparations of the rural accommodations would be indispensable. The number of guests of rural accommodations have been analyzed in regional dispersion, this could tell that the most tourists arrive in the region of Heves and Borsod-Abaúj-Zemplén, however they've been closely followed by Vas and Győr-Moson-Sopron regions, where the quality of the accommodations also show salutatory changes.

2. Changes of data's in regional level in the rural tourism

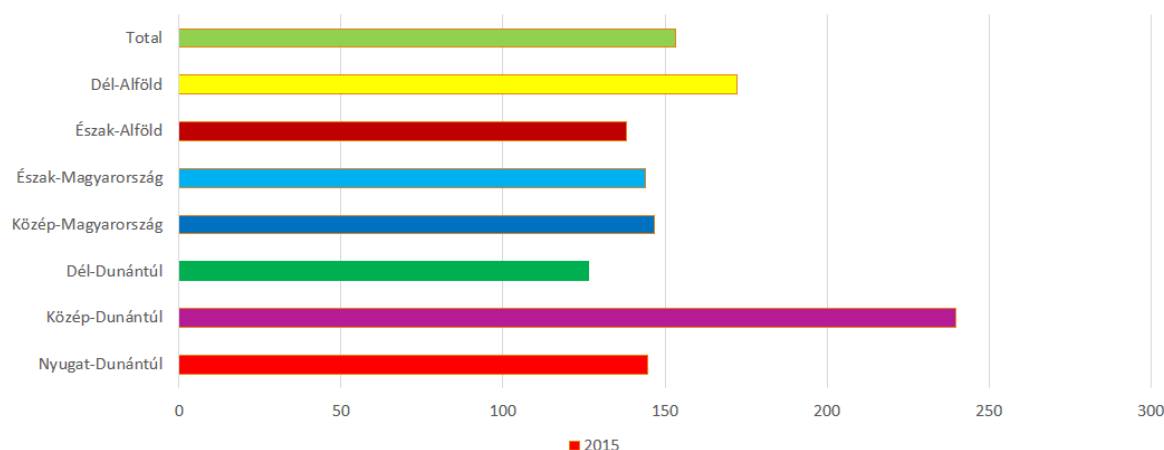
The number of hosts in the statistical regions shows fall back considering to the previous years, the first in the regional ranking is North-Hungary, which is followed by West and South part of the Dunántúl (Figure 2.). The ranking of these regions traces back to historical reasons. The formation of the rural tourism also connected to the Mátra, the East-Mecsek, the Órség and last but not least, to Lake Balaton. These regions kept their comparative advantages, which was made in the 30's, and they still use it as the main engines of the rural tourism's development.

Figure 2: The number of hosts in statistical regions (piece)



Source: edited by authors by HSO 2015

In the view of the nights, in the regional system, the numbers are increasing, the Mid-Dunántúl and the South-Alföld have data above the national average (Figure 3.). The reason of the rise of these two statistical regions' nights, is the growing number of the foreign tourists. There is an increase of German tourists in the region of Mid-Dunántúl, furthermore Danish and Dutch tourists in the region of South-Alföld, the tourists' motivation goes around seeking folk traditions, seeing special sights and of course reasonable price ratio.

Figure 3: Development of overnight stays in statistical regions (nights)

Source: edited by authors by HSO 2015

3. Interpretation of datas in county and township level

In point of number of guests in county level, Heves region is the first in the ranking list (with 2207 people), however in the previous year, Komárom-Esztergom and Csongrád regions showed higher growth. In level of domestic visitors, Heves region's numbers were higher, but in growth Veszprém region was the leader (Table 1.).

Table 1: Rural turnover of the guest accommodations

	Number of foreign visitors (people)	The number of foreign tourist nights (nights)	The number of domestic visitors (people)	The number of domestic guest nights (nights)	Foreign visitors' average residence time (per night)	Domestic visitors average residence time (per night)
Pest county	655	2606	9021	21302	4	2,4
Fejércounty	582	2674	5261	18569	4,6	3,5
Komárom-Esztergom county	1386	7226	1165	4613	5,2	4
Veszprémcounty	1068	3374	12841	29733	3,2	2,3
Győr-Moson-Sopron county	1637	3969	10855	31421	2,4	2,9
Vas county	505	1558	5911	16697	3,1	2,8
Zala county	372	1646	2717	8296	4,4	3,1
Baranya county	1837	5400	10002	25485	2,9	2,5
Somogy county	308	1096	1555	5293	3,6	3,4
Tolna county	485	1218	4028	8809	2,5	2,2
Borsod-Abaúj-Zemplén county	1141	3916	14879	35468	3,4	2,4

Hevescounty	2207	4149	26770	68837	1,9	2,6
Nógrád county	279	741	7514	17272	2,7	2,3
Hajdú-Bihar county	2017	3553	5395	13720	1,8	2,5
Szabolcs-Szatmár-Beregcounty	422	1020	7481	18893	2,4	2,5
Jász-Nagykun-Szolnok county	11	39	906	2448	3,5	2,7
Bács-Kiskun county	626	1538	5566	9456	2,5	1,7
Békés county	38	216	791	4494	5,7	5,7
Csongrád county	1003	1601	4697	19529	1,6	4,2

Source: edited by authors by HSO 2015

In view of the number of hosts, Borsod-Abaúj-Zemplén region's first place is unquestionable, rapid growth can only seen in Pest, Zala and Veszprém regions. In respect of rooms, beds and capacity, the situation is very similar, nevertheless in point of growth, Fejér region is catching up, next to the first 3 regions (Table 2.).

Table 2: Capacity of the rural accommodation

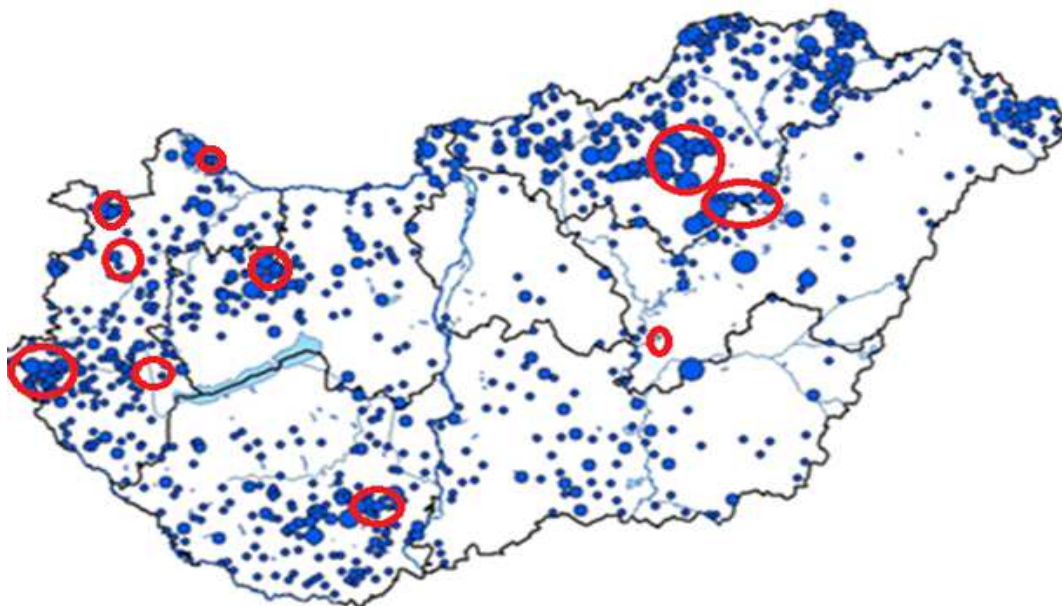
	Number of caterers (people)	Number of rooms (piece)	Number of beds (piece)	Number of seats (piece)
Pest county	163	423	1025	1059
Fejér county	83	272	657	689
Komárom-Esztergom county	34	108	303	316
Veszprém county	159	518	1255	1322
Győr-Moson-Sopron county	165	496	1405	1450
Vas county	144	408	940	986
Zala county	130	390	990	1036
Baranya county	218	581	1424	1433
Somogy county	77	216	521	531
Tolna county	79	267	667	670
Borsod-Abaúj-Zemplén county	405	1171	3134	3324
Heves county	396	1230	3029	3086
Nógrád county	106	296	808	895
Hajdú-Bihar county	98	322	759	771

Szabolcs-Szatmár-Bereg county	165	510	1285	1371
Jász-Nagykun-Szolnok county	24	55	148	148
Bács-Kiskun county	111	336	818	845
Békés county	23	63	155	167
Csongrád county	80	260	668	682

Source: edited by authors by HSO 2015

The growth of the regions depends on the efficiency of the leader of the FATOSZ (The National Association of the Rural and Agro-tourism), the willingness of EU's contest, thus Pest, Zala, Veszprém, Fejér, Csongrád, Győr and Vas regions are counted as the most active ones in the area of applications. Furthermore, it is true that these regions have the biggest turistic GDP and the highest Touristic Penetration Index as well in a national level, of course the people with higher disposable income are also contributing to the faster progression.

Figure 4: Most rural settlements in Hungary



Source: edited by authors by HSO 2015

The analysis of these datas could tell that the most tours are in health-tourism and in rural tourism. The leaders are the rural guest houses near Eger, around Demjén and Egerszalók, more over the guest houses, which are around Bükkfűrdő, Balf, Lipót, Cserkeszőlő, Kehidakustány, Berekfűrdő and Pápa (Figure 4). These are closely followed by the traditional centers, which were formed due history and where the cultural and the green tourism prevail (Hollókő, East-Mecsek, Őrség and Mátra). Rural tourism plays an important role in the wine regions of Hungary (Dunay A. et al 2015)

4. Quality tourism in the area of lodging

For the qualification of the accommodations, several kinds of trademarks will be available (exp.: ökoporta), in theory all of these types could be an effect on the rural tourism as well, if it

would be true, it could make a bigger difference among the 1253 sunflower-guest houses (Csizmadia, L. 1992).

At the rural accommodation establishments 1-4 sunflowers are used in conformity with several quality criteria, the external (building, courtyard) and internal (building, installation) spaces, the variety of services and their necessary staff requirements are classified separately (Figure 5.).

The trademark that certifies the rural accommodation establishments with a sunflower is created and operated by the ministry led by the minister of tourism, whose fundamental purpose in accordance with the 239/2009. (X. 20.) government decree that contains the detailed terms and conditions of the accommodation service activities and the order about the issuance of licenses for operation of accommodation, is to guarantee high-quality accommodation services that meet the professional expectations. The classification of services is executed on the basis of professional criteria that was developed by the Association of Rural Tourism and Agrotourism and was approved by the ministry led by the minister of tourism.

In the sunflower system of the National Trademark certification, 1253 accommodations have been registrated until the end of 2016. The high number shows that it is necessary to make quality renovations in the area of lodging.

From the 1253 rural guest houses (FATOSZ 2016):

- 2 sunflower: 24
- 3 sunflower: 160
- 4 sunflower: 1069

From this data, it can be seen that the system does not work correctly, because its aim should be the branding, so they could make an actual qualitative difference among the rural accommodations. By analyzing the data, it can be told that during the classification almost every accommodation has got the 4 sunflowers, this is the reason why it is so difficult to make a difference in quality within the system. The re-valuation is in progress, but the systematization under these conditions is unserviceable.

Figure 5: The National Trademarks



Source: edited by authors, www.nfh.hu/nod/8622

Regarding the distribution of trademarks, Borsod-Abaúj-Zemplén county leads, then Szabolcs-Szatmár-Bereg county follows on the second place, while Heves and Baranya counties are on the third and fourth place.

Each of the accommodation rating marks can affect the rural tourism, as a tourism product (Figure 6). However, it would be worthwhile to separately mark the eco-receptions that engage in organic farming with a green sunflower eco-label as well. The definition of eco-label refers to a certificate of a certain level of environmental performance that can be acquired voluntarily. Its attainment is based on objective criteria and any product, manufacturer or service provider that complies with the given conditions can obtain it. (Bodnár, L. 2005)

Eco-labels encourage the entrepreneurs to be more mindful during their activities of the requirements of environmental, social, cultural and economic sustainability, thus present a responsible attitude towards their environment. Eco-labels are capable of distinguishing those products and services that meet the environmental, social and economic standards on a higher level than as it is required by the legislation. This distinguishing mark allows consumers to consciously choose the certified product and the companies that manufacture and sell it can gain a competitive advantage (WTO 2004).

Figure 6: Trademarks of accommodation



Source: edited by authors, www.nfh.hu/nod/8622

The trademarks rate the accommodation establishments with stars, crowns and backpacks (Figure 6), their operation could facilitate the development of quality tourism in the field of rural tourism.

5. Conclusion

To sum up, we can say that by all means the introduction of the new sunflower trademarks' system by Csilla Szalók has set prosperous developments afloat in the field of rural tourism. The Association of Tourism and Agrotourism (FATOSZ) jointly with the Ministry of National

Economy have decided to improve the quality of the tourism product. Their common goal is to attract the target groups that participate in rural tourism back to rural Hungary. They would like to enhance the quality of accommodations and aim to meet the needs of the "responsible rural tourist" as well. The "responsible rural tourist" aspires to have the least possible effect on the environment and culture of the visited region. The responsible visitor minimizes the damage caused by himself and with his awareness of consumption promotes the local people's welfare. The responsible tourist shows great interest in the agrotourism and getting to know the local folk culture.

It would be rewarding to introduce additional trademarks so the visitors could gain more trust in quality, which contributes to the development of the responsible rural tourist model. The operation of the trademarks promotes the local products' improvement and their presence in the market (Kósa, L. 1984,1998).

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"Humanity" as part of the CSR strategy

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Abstract

Corporate Social Responsibility (CSR) is one of the most popular topics in recent times and one of the most discussed in the literature. The idea of CSR could be summarized in a way that maximizing profit for the owner is not the only reason for the existence of the company, but it has to fulfill a number of other more significant objectives. The essence of this idea is to assume that the company is supposed to serve man, such as the owners, employees, co-workers, consumers, the local community, and thus serve the good of mankind in a global sense.

This article, by analysis of the literature study and the survey method, has attempted to examine the extent to which companies respect the dignity of the person, or "humanity," restricting profit-making "at all costs." Are employees ready to give up the particular (utilitarian) benefits of higher value, respecting human dignity? Can organizations recognize a person in another person, and do they commit something? These and similar questions determine the direction of analysis in the presented paper.

Keywords: CSR, personalism, work ethics

JEL Classification: D23, M14, O15, M59

1. Introduction

Every business involves the provision of goods or services to the consumer. However, it is up to the management to decide how it will be done. Will it recognize that the business world is a jungle in which only the strongest, the most ruthless will survive? Or maybe the weaker ones will have a better chance of survival when such features as respect, trust and other similar components of morality will make people choose safety and peace?

Describing the moral attitudes of the manager and employee, the literature cites three terms. It is recognized that a good manager or employee is one who (Wiatr, 2015, 60-78; Czekajewska, 2009, 179-188):

- in his choices and practice is led by one's duty (deontonomism);
- effectively achieves goals that are considered valuable / utilitarian (utilitarian);
- makes decisions after analyzing their impact on people / people (personalism).

These attitudes indicate the standards of morality from which human decisions or their effects will be judged to be good or bad, ie: duty, effectiveness in achieving valuable goals and respect for human dignity.

The first of these positions emphasizes absolute obedience and loyalty in the order of subordination (as in the army - command is law). The person does not analyze the causes and effects of one's actions, entrusting one's management with utmost care. This kind of employee morality is very much appreciated by the management of utilitarian and personalistic approach, as it is not contradictory to the ideas of either. Reliable, diligent worker is a desirable ideal in any company. (Skiba, 2013, 179-180, 208-209)

As for the very question of morality, one may have some doubts whether it is rational or maybe "blind" option. Representatives of deontology assign responsibility for their actions to authorities and their possible fallacy. One decision to choose such an attitude resigns from further subjectivity in the process of choosing a particular act, in a particular situation (the authority entrusted to one). Thus the deontologically guided are passive pawns (Pinckaers, 1994, 233), determined and controlled externally by persons of the other two types of morality.

The next moral attitude encountered in the organization shows an axiological and teleological attitudes, that is, the achievement of a valuable / useful / beneficial goal is considered to be at the center of moral duty. This type of morality remains in line with the liberal worldview and Protestant ethics. Man is called to rule over the earth (the Bible) and aims to achieve self-fulfillment through work. It is ethics aimed at achieving the goal effectively and optimizing action as a way of life. Running a profession, work is a moral obligation as a chance for development, self-realization, as well as realization of values in the spirit of entrepreneurship (saving, resourcefulness, solidarity, etc.). Work is the realization of values, or transformation of values into specific goods. Visibility is utilitarianism, or emphasis on usability (utility calculation, ie profit and loss calculations). Morality in the presented approach can be defined as the art of achieving effective goals. (Wiater, 2015, 69-75; Weber, 2017)

In case of axiological and teleological morality the undisputed subject of moral decision-making is a free person who realizes values for oneself and for the environment. Nevertheless, during moral evaluation it is necessary to analyze whether this implementation of values can proceed with the use of all means and tools. According to the classic definition of morality, this phenomenon occurs at the moment of confrontation of the human act or its consequences with their influence on another human being. If this is the case, as can be seen in the discussed concept, the goal of the realization of good value diminishes the way it is achieved. Evil is not seen as reaching the goal. So there is a willingness to "step on one's mother" to achieve it. Interest, gain, profit, utility become superior to relationships with other people. (Chrysides & Kaler, 1999, 102)

The answer to instrumental treatment of another person is personalism. As the name implies, person - man stands in the center of morality, of the moral standard, with all the qualities, standing above other beings in the world. As many followers of this view point out, such a fundamental feature will be dignity. (Biesaga, 2012, 133)

Ethics of responsibility and conscience, because they also call this attitude to morality, is to complement the previous trends and eliminate their weaknesses. Personalism ethics, created in the spirit of humanism, is oriented towards the person and advocates the humanization of economic life. It also emphasizes human subjectivity in relation to other subjects, ie, not treating employees as tools in the workplace. Personality is based on the respect for the dignity of both, oneself, and other person, or on seeing the other person, like oneself. And it also treats work as a relationship between people, which must be conscientiously fulfilled. (Klimczak, 1996, 50-53)

In the context of CSR, personalization will involve responsibility for responding to the needs of other stakeholders. Since the manager is a person acting for others and on behalf of others, the personalizers emphasize the role of conscience as a factor determining responsibility. If only a person guided by conscience can act responsibly, then professional competence is conditioned by moral competence. Thus, CSR will manifest itself in the distribution of tasks, in particular management, to those with professional competence who are responsible, conscientious and respect the subjectivity (dignity) and property of both themselves and others. (Mroziwski, 2014, 149)

2. Corporate Social Responsibility – general characteristic

All business decisions are not only economic or functional, but also social and moral in their nature. Hence, we are now facing the growing popularity of Corporate Social Responsibility (CSR) (Zadros, 2016). Synonyms for such an organization are *inter alia* (Bevan et. al , 2004, 13): responsible organization; ethical business; civic organization or the social environment of the organization. CSR is an example of one of the factors that can be described as necessary one (though insufficient) (Lundy & Cowling, 2000, 169) ie those that are important for achieving the intended result, but in itself do not guarantee business success.

CSR can even be called a management philosophy because it affects all aspects of the organization's functioning, both financially and technically as well as the human factor in the organization, especially in the context of such non-measurable characteristics as leadership, culture, communication, or employee relationships that correspond to global ethical issues (Howard, 2010). CSR philosophy, like other philosophies, answers important questions related to everyday business life and manifests itself in the routine actions and decisions made by each and every individual, both by the management and by the employees (Ubreziova et. al., 2016). In this context some can rise a question if it possible to include this type of norms in the framework of eg formal ISO standards (Formankova et. al., 2016)

The essence of CSR can also be learned by combining the concept of Corporate Social Irresponsibility - CSI, which gives rise to the belief that moral behavior ultimately yields greater returns than immoral behavior. In the CSI concept, some business activities may be perceived as cost-effective in the context of ad hoc gains, but ineffective and often damaging organizations in the context of long-term strategic solutions. In this meaning, CSR has much to do with pragmatic and rational thinking.

CSR is a concept whereby an organization takes responsibility for its impact on society and the environment. (Australian Academy of Science, 2012) It is a form of awareness, acceptance and management of the implications and results of decision-making in organizations. (Pearson Education, 2012)

CSR is not just jargon, vocabulary (such as the now popular "green" adjective), or spectacular local, environmental, or social events in which an organization participates or organizes. The concept of CSR is also a form of organizational metaphor to make known what is unknown and to achieve a balance of organization both in relations with the environment and with its own employees. (Debeljak, Krkac̃ & Bus̃ljeta Banks, 2011, 5-22)

In this latter area, the social dimension of an organization's functioning refers, *inter alia*, to (Bevan et. al, 2004, 18): adaptability and empathy, openness, integrity and honesty in relationships between management, employees and stakeholders; patterns and standards of behavior of employees towards customers, consumers and all units participating in the company's activities; shaping the image of the organization at the local community level through employee narratives as well as declared and real value systems based on which

employees work. In this context CSR can be combined with moral aspect of employees' attitudes to work (Ubreziova et al. 2016) or even sensitivity to social problems such as the issue of employing people with disabilities (Sharma & Dunay, 2016).

Attention is drawn to the fact that components such as ad hoc profitability, general profitability or goodwill on the market are not success factors; they are merely a result of the concentration of the company's activities on good practices. Highly efficient companies focus equally on clients, employees and their satisfaction (The Work Foundation..., 2002, 4), which coincides with the personalist trend.

CSR is defined as a "business done in the right way" and is opposed to the idea of "doing good business," which by definition allows unethical behaviors and actions, both for one's own personnel and for those who work with the organization.

3. Data and Methods

This paper will present the fragmented results of research that are part of an international project on ethical attitudes (Poor et. al 2016). The authors of the study decided to investigate whether there are differences in ethical attitudes represented by employees characterized by different variables like dwelling place, sector where work experience has been gained, age and seniority.

For the examination purpose 1000 employees were selected at random. From this sample 803 questionnaire forms correctly filled in were obtained. In the selection sample was used a method without returning. The research was conducted in 2013 on the group of people from the area of Southern Poland (Table 1).

Table 1: Sample characteristics

Features	Number	Percentage
<i>Dwelling-place</i>		
village	281	34,99%
small city	145	18,07%
medium city	271	33,77%
large city	104	12,97%
Sum:	803	100%
<i>Sector where work experience has been gained</i>		
public sector	203	25,28%
private sector	377	46,95%
both	218	27,15%
none	5	0,62%
Sum:	803	100%

Source: own study

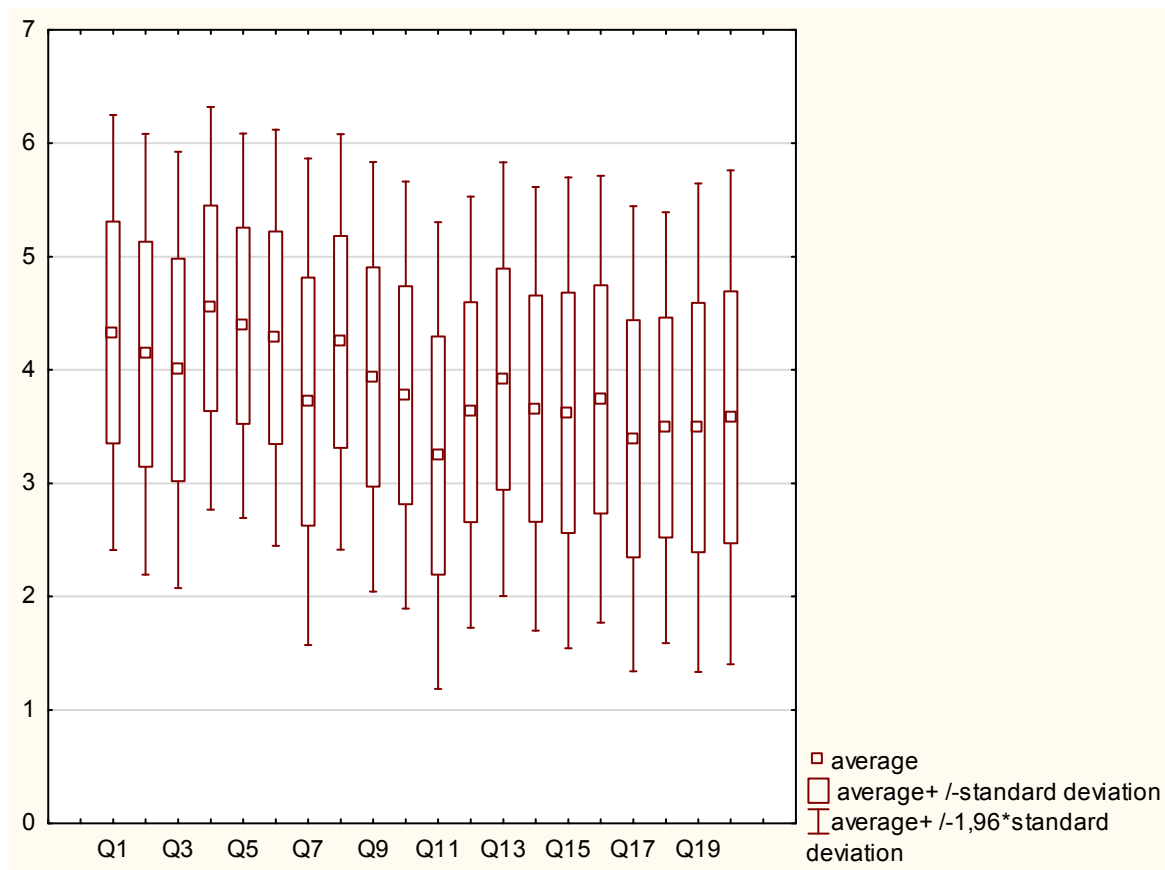
The research was aimed at determination of ethics behavior. Questionnaire was created by D. Forsyth (1980). The respondents were asked to give their opinions about 20 statements, their opinions were expressed in range between 1-5 where 1 meant „I fully agree”, 3 – „neither agree, nor disagree” and 5 meant „I fully disagree” with a statement.

For examining the connection between variables and respondents statements it was used the chi-square test (χ^2) which lets verify the zero hypothesis about the independence of two variables X and Y, towards the alternative hypothesis, according to which the variables X and Y are dependent (Białek & Depta 2010). In order to determine the power of the relation of features a C-Pearsona (C_p) index was applied. This paper contains correlation coefficients statistically significant on the level $p < 0.05$. This criterion made the authors focus on correlations with significant influence and only those have been analysed herein.

4. Results and Discussion

The research carried out in the selected part of the paper also referred to the analysis of personalistic attitudes in the analyzed group. In relation to this group of statements (statements 1 to 6) (Figure 1), there were statistically significant correlations related to age, work experience and residence of respondents (Table 2). And with the increase in the age and professional experience of the respondents, their tendency to personalistic attitudes were growing. Likert's average response values were also relatively high in comparison with the statements given in question.

Figure 1: Average and standard deviation



Source: own study

It is also interesting to see that there is a relationship between the answers given and the place of residence of the respondents. The smaller the place, the more likely the respondents to express personalistic attitudes. The size of the residence also influenced the respondents' opinions as to whether the "moral" behavior was closest to the idea of the most relevant action. People in smaller towns more often expressed acceptance for this type of statement. Both

analyzed relationships can be tried to interpret by combining personalist attitudes with traditional upbringing, which in Poland is strongly associated with religiosity. This in turn is especially nurtured in rural and small-town environments. Behind such a reasoning there is also the fact that the statements analyzed are not age-dependent, and therefore these attitudes were shaped in childhood, and they were strengthening with age

Table 2: C-Pearson coefficient for the selected statements on respondents' sector where work experience has been gained, dwelling-place, age and seniority

	Statement	Sector where work experience has been gained Correlation coefficient	Dwelling-place Correlation coefficient	Age Correlation coefficient	Seniority Correlation coefficient
1	*People should make certain that their actions never intentionally harm another person	0.0327	-0.0086	0.0370	0.0425
2	*Risks to another should not be tolerated, irrespective of how small the risks might be	0.0376	-0.0364	0.0766	0.0778
3	*The existence of potential harm to others is always wrong, irrespective of the benefits to be gained	0.0396	-0.0193	0.0962	0.0978
4	*One should never psychologically or physically harm another person	0.0240	-0.0010	0.0584	0.0606
5	*One should not perform an action which might threaten the dignity and welfare of another individual	0.0351	-0.0227	0.0585	0.0557
6	*If an action could harm an innocent other, then it should not be done	0.0331	-0.0795	0.0767	0.07914
7	Deciding whether to perform an act by balancing the positive consequences against the negative consequences of the act is immoral	-0.0793	-0.0576	0.1063	0.1098
10	Moral behavior closely corresponds to the idea of the most "perfect" action	0.0241	-0.0991	0.0934	0.0957

* Statements about personalistic attitudes

Correlation coefficients in bold are statistically significant on the level $p < 0,05$

Source: own study

Although statements 2, 3, and 6 reveal age and employment correlations, none of the statements related to personalist attitudes were defined by the place where the respondents gained professional experience (public sector, private sector or both sectors). The place of professional experience, however, had a significant impact on the opinion of respondents on whether decision-making was based on the combination of potential positive and negative consequences of the action that was immoral (statement number 7). It seems that workers in the public sector

are more likely to have a negative opinion of utilitarian attitudes. At the same time, employees with experience in the private sector show a greater understanding of decision-making mechanisms that prioritize the maximization of benefits.

5. Conclusion

The results of the study reveal that the representatives of the analyzed population represent personalistic attitudes, that is, those which focus on the particular importance of the human person, one's desires, aspirations and the unquestionable value of man. In organizational terms, this can refer to both, colleagues and customers and other stakeholders in the organization – a relationship that has been termed as „consensual and fiduciary” (Vee & Skitmore, 2003, 117-127). From a CSR perspective, such attitudes may be considered desirable. While the definition of the World Bank recognizes corporate social responsibility as "engaging in sustainable business development and working with employees, their families, local communities and the whole of society to improve the quality of life - in a way that is good for both business and development "(Surdyk, 2007, 198-200). Thus, it imposes the obligation to implement the concept on the managers of organizations, but the process of implementing the idea in day-to-day practice rests with the regular employees (Rybak, 2004, 131). They must therefore not only understand but also recognize the importance of the human person regardless of the social role that he or she carries.

The positive signal from the research results is the greater willingness of public sector employees to represent personalistic attitudes. This is a situation in which it has been understood that, firstly, the organizations of this sector serve as social servants and, secondly, they are subject to continuous image assessment. We can even assume that the public sector is ideally close to the concept of CSR, what can be translated, funding and legal specifics of his actions (Czarnecka, 2016). Paradoxically, however, the approach is most strongly promoted by commercial entities, which in CSR see not only the element of building a positive image but also the factor of building competitiveness, especially in the long term perspective. In light of the above, it seems to us that private sector workers have a relatively high rate of support for the utilitarian idea. Of course, the question remains whether, for this group of workers, decision-making based on the principle of benefit is perceived in the short-term, or long-term perspective. With regard to the first situation, employee attitudes would be contrary to the idea of CSR, in the second case they would coincide with the concept. The topic is undoubtedly interesting and requires further profound research, even from the perspective of other culturally and religiously different environments. Especially since many ethical theories created in the Mediterranean and in Western European countries (Dion, 2012) may not allow such simple transitions to human attitudes and behaviors, including workers, in organizations that operate eg in the islamic (Naresh & Raduan, 2010), or buddhist countries (Slabbert & Ukpere, 2011), or others.

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Strengthening Environmental Consciousness and Ecological Responsibility of Economists and Managers Within the Era of Globalization

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Abstract

Attempts to develop environmental consciousness and environmental responsibility of current people are considered to be socially urgent due to the new environmental problems, risks and threats in the world. Extremely important is to strengthen environmental consciousness of economists and managers as, in a large extent; they are responsible for anti-natural evolution damaging the Earth. Therefore, there is a decrease in natural and limit in a spontaneous order. Strengthening the environmental consciousness presumes focusing on pro-natural and biotic orientation of the curriculum for economists and managers so that their education enables them to learn the absolute priority of life, the compatibility of culture with nature. In real, it means to integrate some subjects into the curriculum with the aim to understand mutual connections among the organisms and the relationship of Man towards the environment as well as to reach the environmental consciousness as a premise of a responsible decision-making process.

Key words: Environmental Consciousness, Environmental Responsibility, Nature, Culture, Anti-natural Evolution

JEL Classification: F64, H41, O15, O44, Q01

1. Introduction

The process of globalization goes hand in hand with the technological development and substantially changes the university education. The current demands on the graduates of the economic faculties and universities are connected with the development of the global market and a new global economic and social environment. The growing global market provides the possibilities for putting forward economic interests in a whole world rate, for increasing the economic growth or business development as well as for meeting the human needs. At the same time, the technological progress, reaching the economic growth and a growing well being of people are in the shadow of the risk production. As stated by U. Beck in a so-called risky society, the society of catastrophes, we talk about “the economic blindness towards risks“, to which a material poverty of people in some parts of the world is connected, or ‘the economic monocular vision. The reason for this is that the natural and technical rationality, on which a market mechanism leans, is focused on an effect coming from the productivity and just after that the threats connected with them are considered (Beck, 2011).

U. Beck claims that the key civilisation qualification in a risk society copes with the fear and uncertainty (Beck, 2011). In relation to that, there comes the question whether the formation of this skill belongs to the basic tasks of educational institutions or these institutions shall strive for strengthening environmental consciousness and ecological responsibility of the students and clarify them the need to build a sustainable society.

We can agree with an opinion that the existence of environmental legal norms are not and cannot be adequate for determination of environmental consciousness (Smolková, 2004). Mainly in the 70's we can see attempts to increase the rate of environmental consciousness as well as the attempt to accept environmental approaches in the political and legal level (Ibid.). Nowadays, these attempts can be marked as socially demanding, regarding the new environmental issues, risks and threats in a new global environment. As for example, the professor M. Šikula is convinced that we observe a specific time delay in the formation of environmental consciousness and human conscience. As it is stated, the shift in environmental thinking and action of generation is much slower in comparison with the fact that the global conditions on the Earth are getting worse. In such a connection he states that: "There is no education towards the global environmental feelings, ideas, challenges and warnings of environmental professionals remain ignored, and they are very often doubted and ironized." (Šikula, 2003, p. 261) Therefore, particularly important is strengthening the environmental consciousness mainly of those subjects who carry out economic activities in a new global environment. The impulses for justifying such a demanding task today, they arise from the situation in a new global social and economic environment in which the state of natural environment points at the irresponsible approach toward the use of natural sources, waste disposal, etc. Regarding the fact that the need for providing the education to future economists and managers, the education which will make them realize that the nature is the system superior with values and functions to the culture and economics, whereby the world of culture is nowadays growing at the expense of the biosphere.

2. Data and Methods

This theoretical study stems from the qualitative research coming from the theoretical analysis of the cultural evolution, development of globalizing culture and it gives reasons why it is called "anti-natural." In such a connection it focuses on a fact that economy as a dominant subsystem of the culture takes the major part in unequal social and cultural burdening of nature and global environmental crises. Furthermore, it tries to theoretically justify the need of restructuralization of global economy so that it was sustainable. However, it firstly needs the change in a value orientation of a current Man. It becomes a challenge for the educational system and therefore, the paper gives reasons for the need of the pro-natural and biotically oriented education which forms and strengthens environmental consciousness and ecological responsibility of young people. One of the aims is to focus on a major part of economy in a global environmental crisis and regarding the reasons for the strengthening environmental consciousness and ecological responsibility of future economists and managers. The theoretical study points at the fact that one of the solution is to strengthen their environmental consciousness and ecological responsibility through some social subjects implemented in the curriculum of study programs of economic faculties and universities. These are mainly the subjects – Ecophilosophy, Environmental Philosophy and Environmental Ethics.

2.1 Anti-natural cultural evolution and socio-cultural burdening the nature

According to U. Beck, the demolition of ecologic and natural basis of life makes us think differently about the relation between the nature and society at the end of 20th century. Even though the nature does not create the culture, it precedes it in the time and creates the conditions for its creation. The culture as a socially and historically conditioned expression of the social life depends on the nature and is connected with the historical process of the change of the world, which is named as the humanization of nature. At the same time, it corrects and limits the nature. This process, called as humanization has been carried out by a conscious activities in the original natural conditions and their intentional transformation, mainly by the productive

activities. In the past, the gradual change of the natural environment happened towards the “modifications” for the human purposes. Up to these days, the culture has been modifying the original natural environment and Man as such, in a different way than the mechanism of biological evolution.

At the end of 20th century the nature has become the inner equipment of the civilized world which has been damaged and threatened in natural conditions of its reproduction. It means that the threatening, integrated into “the universal circulation of the industrial production” and these are not only damaging actions but they become an integral part of social, economic and political Dynamics (Beck, 2011). The problem is that the culture can be developed just up to the moment until it does not convert its natural basis, so-called natural environment as well as the nature of the human himself. We need to understand that the nature is also a system which had created the human, covered at the same and it stands above the culture with functions, structures and values (Šmajs, 2014). Even if the culture is anti-natural, it has been a developed system from nature and at the same time it is a dependant system from the nature. “The culture represents young, artificially constituted ‘being’ inside of the older ‘being’ constituted naturally within the nature.” (Šmajs, 2008, p.25) It is created by an intentional activity of Man which brings some dangerous effects for the Man. As a Czech ecologist, philosopher and publisher Jozef Šmajs states, the culture can be considered as the process and result of evolution which exploits and damages the Earth whereby it eventually aims towards diminishing the natural (Šmajs, 2008). Man is responsible for “the strange anti-natural evolution” – that is the cultural evolution. The conflict of the natural and cultural evolution has been the biggest reason of the global ecological crisis. Šmajs comments that the recent existential conflict of the culture with the Earth is the battle for sustaining the natural shapes, ordering the living and non-living systems and sustaining the natural information (Farkašová, 2007).

Man is a creator of the culture and at the same time he exploits it and is responsible for the gradual degradation of the environment, destruction of the living conditions on the planet, and also responsible for the worsening state and quality of life on the Earth not only from the point of the Man but also from the views of other forms of life on the Earth (non-human being). It apparently points at the conflict of Man with the nature. Thanks to developing material culture, as for example the highway constructions, factories and towns, there comes the limitation, demolition and plaguing happen to the living and evolutionally developed natural order. “Regarding this damage the culture is not only profitable reconstruction of nature for our kind but also too quick and fast replacement of our natural being which remains biologically compact with Man.” (Šmajs, Binka & Rolný, 2012, p.44)

The fact is that the culture leads to the limit of natural order and an ecological catastrophe, mainly the principles of the market and profit to which a dominant subsystem of culture – economics, is leaning on. Thus, economics with the aim to develop culture, takes the products, processes and energy from nature. Except of irrational dealing with raw materials, problems with waste and climate changes, the contamination of the biosphere are becoming serious problems. The nature is a system superior to the culture and economics with functions and values. However, the growing effort of economics is to increase the economic growth, cumulate and consume the overproduction which leads to the fact the world of culture is growing at the cost of the biosphere. Global environmental crisis is the result affecting the whole life on the Earth.

“In the era of globalization, a new global environment is emerging, thus affecting the quality of economic growth regarding services, goods, competitiveness of organizations, and also relationships within them. Last but not least, it affects the relationships between man and nature,

economy and nature, the technosphere and environment.“ (Klimková, 2016, p.85)Expansion of global economics, the production of overproduction, its cumulation and consumption are the main reasons of the global environmental crisis which can be labeled as the social crisis due to the fact that it interferes into the life of the society. It happens due to the culture, i.e. thanks to Man. In such a connection, we can agree with R. Leakey that the destruction of culture does not mean the destruction of nature, whereby the destruction of nature means the destruction of the culture(Leakey, 1996).Regarding the causes of the global environmental crisis there are the questions suchas: how to ensure so that the economic activities are subordinated to the culture and mainly to the nature, and how to allocate an artificial metabolism of industrial production and final abiotic consumption apparently damage the Earth, from the metabolism of living systems(Šmajs, Binka & Rolný, 2012). One of the solutions is to consider the modern education which does not have the right direction. “In general, it can be stated that education for sustainable development and the future can play a significant role in schools, because it can link regions, overcome disciplinary boundaries and facilitate the connection between the local and global dimensions of sustainable development.” (Klimková& Orosová, 2016, p.794)

2.2 Socio-cultural burden of nature – challenge for educational system

J. Šmajs points at the need to consider the recent education. He claims that an attempt to gradually increase the well-being of Man leads towards abnormal exploitation of nature by the production, transport and final personal consumption. At the same time, it helps forming Man and culture in a way that it contributes to deepening the ecological crisis, whereby it should focus on educating responsible citizens so that the focus will be put on understanding the meaning of nature as a value or clarifying the existential dependance of Man from the nature as it is the only home of Man and his culture. Mainly with the preparations of economists and managers, there is the need to comprehend the relations of nature and culture and nature and economics. At the same time it is necessary to teach them how to critically evaluate some economic activities connected with development of economics and with the growth of globalizing culture. *(Regarding the globalizing culture G. Lipovetsky and H. Juvin think of “global culture” or planetary culture. It starts altogether with the global market and is created by the combination of main organization principals suchas – market, consumption life-style, science and technology, individualism and cultural and communication industry. That is an only common culture significant with the similar consumption procedures and aims, and generally accepted thinking and actions (Juvin&Lipovetsky, 2012).* Yet, sometimes they lack reasonable feedback from the Earth as the only possible host environment. Eventually, as Kolářský states: “The global scale of the current ecological crisis is connected with the economic globalization. The whole Earth suffers from devastation.“ (Kolářský, 2011, p.22)The serious problem is that the production and consumption continue in exponential speed, the dynamics of which can be destructive and forceful and may end with the catastrophe. At the same time, the natural problems used by humankind to fulfil its needs, increase very moderately, or more precisely they have been decreasing. The motive of the productive and non-productive burden of the nature is to reach the well-being of Man. Some economists state that “current civilization is based on the massive and global consumption.“(Klinec, Pauhofová&Staněk, 2009, p. 26)The development of economy increases the mass consumption which is connected with the spread of consuming, as one of the risks accompanied with reaching the economic growth and consequently the development of global economy. It is obvious that the mass consumption means a lot for the development of economy as it is an inevitable condition of economic growth. At the same time, mainly from the point of view of environmentalists, the massive consumption is the mostly criticised feature of civilization processes. It is connected with the paradigm of anthropocentrism. Except of the fact that the big socio and cultural burden of the nature is

connected with that, it does not have to be true that the growth of the social and personal consumption brings benefits to the society and Man. As it is stated: "The current consumer society does not consume under the pressure of the biological necessity. It is about fulfilling artificial needs of Man with the orientation to the massive use of cultural and consumer technology with the aim to broaden the human activities in non-working environment." (Špirko, 1999, p.66) The growth of consumption in the society justifies the fact that economic criteria and interests are superior above the other interests of a current Man. Thanks to the spread of consumption life strategy the nature is damaged as well as the environment and other values necessary for the lives of the future generations. The good manager should realize that in the global economy as the whole, the overexploitation of natural sources, such as rainforests causes the global instability and economic disbalance. The transfer of the waste from one side of the world to another means contamination anyway (Klinec, 1996).

Socio and cultural burden of the nature happens also thanks to the poverty and social marginalization. The poverty is connected with the higher pressure on the environment which represents the source of income. Thanks to the poverty the people are exposed to environmental risks, they agree with the realization of dangerous projects for the environment. Mainly the citizens of the global South suffer from ecological risks where the mineral sources decrease and there is the lack of agricultural commodities. Unequal production of food and its division are connected with the above mentioned facts. Paradoxically, these are transferred from the poor countries of the South to richer countries in the North where thanks to the rising consumption the need for these sources and agricultural commodities grows.

Regarding the socio and cultural burden of the nature we can talk about the ecological carelessness connected with damaging and lacking the natural, aiming towards deeper ecological crisis resulting from the human activity, and that is culture. We talk mainly about damaging the natural phenomena, as for example the contaminated air and water, acid rain or ozone hole, etc. It is different from the other ecological crises not only with the fact that it is global but also the historical sources and possible historical consequences. It calls for the need to restructuralize the global economy to be sustainable. The change in the values of the modern Man must precede. This is also the challenge for the educational system for all the educational institutions. Education is important for forming the environmental consciousness which contributes towards building the culture as well as the relationship of Man with the world. The influences of the nature and social environment affect the moral and world-view of people (Šmajš, Binka & Rolný, 2012). The educational system should stem from the critical analysis of developing and globalizing culture and it should focus on pronatural and biotic orientation of the curriculum. This is the only way to strengthen the environmental consciousness and build the responsible relationship of the young generation towards the nature.

Hans Jonas conceives the environmental responsibility and takes it for the ethical category. He thinks that thanks to the responsibility we can prevent the ecological catastrophe and adds a new responsibility - the responsibility for sustaining the life of people on the Earth. This ethics is the ethics of sustainability, protection and prevention (Jonas, 1997). It presents the considerate relation of the culture and Earth and we agree with the opinions of J. Šmajš that as opposed to the traditional education the new leading idea of the education should be the "economical renting relation of the culture towards the Earth" (Šmajš, 2008). Thus, it requires such education for young generation which enables people get to now the absolute life priority, compatibility of culture with nature. It should lean on biophilia education, strengthen environmental consciousness and clarify a possible rate of the activity of civilization into the environment so that the stability of ecosystem would not be damaged (Ibid.). It is necessary to implement such education into the educational process of economic faculties and universities and thus

strengthen ecological responsibility of future economics and managers which is the part of societal responsibility of entrepreneurship in the era of globalization.

3. Results and Discussion

Environmental Consciousness and Ecological Responsibility of Future Economists and Managers and Strengthening through subjects of Socio-scientific Courses

So-called pro-natural and biotically oriented education is undoubtedly an actual challenge for the whole educational system. Regarding the fact that economy as the dominant subsystem of the culture has a reasonable proportion in the anti-natural evolution which exploits and damages the Earth, it is necessary to devote the attention towards all the entities realizing their practice in an economic sphere. Thanks to pro-natural and biotically oriented education the environmental consciousness and ecological responsibility of future economists and managers in a new global environment are formed.

Environmental consciousness presumes the choice of responsible procedures and objectives with the aim to transfer to sustainable development of the society. It covers the knowledge about the recent state of the environment, environmental problems, ecological and environmental trends, as well as about traditions regarding the issues of environment. Then, the complex understanding of mutual relations among organisms; relation of people and environment, reaching environmental consciousness presumes the responsible actions. Thanks to environmental consciousness, economists and managers should understand that all biosystems have a finite capacity and that requires responsible management of human activities so that they will not threaten the health of these systems. More particularly, it is enough to monitor and decrease the negative effects of economic actions on environment (e.g. by recycling, ecological products, use of alternative energetic sources, lowering the material and energetic demand of the processes, environmental managerial systems of process managements, etc.).

Ecological responsibility of economists and managers is a part of the requirement for socially responsible entrepreneurship representing the journey of the sustainable development. *(Within an interest to increase the quality of life on our planet and provide the sustainable development, entrepreneurship in the globalizing era must consider the requirement for the social responsibility in entrepreneurship so that none of the three pillars (economic prosperity, social capital and quality of environment) has developed at the cost of the remaining ones).* The requirement of sustainability which is very recent in this era of globalization and the course of Entrepreneurial Ethics focuses on that. A. Crane and D. Matten consider the sustainability as a key objective for Entrepreneurial Ethics (Crane&Matten, 2007). In such a connection they point at ecological responsibility based on which we should prevent the health damage as well as the environmental contamination and other negative effects for Man and nature.

Educational institutions take part at strengthening the environmental consciousness and ecological responsibility with an attempt to provide the complex preparation of future economists and managers to realize demanding tasks in a new global economic and social environment. Apart from the fact that they pay attention to updating professional courses as the key subjects in the curriculum, they create the space for implementation some socio-scientific courses. These should offer the general overview of the happening to the students, as well as problems and various questions regarding the situation in the world enabling to create their own philosophy of life, values and objectives.

First of all, with the help of some socio-scientific courses (Sociology, Environmental Politics, International Relations, Entrepreneurial Ethics, i.e.) it is necessary to reveal to some graduates also the other side of the global economics, revealing global inequalities, global problems as

well as some risks and threats affecting the whole population. At the same time, it is necessary to point out the fact that ecological problems exceed the field of social problems because these can cover the detriments of those which do not belong to the human society, i.e. animals and plants (Kolářský, 2011). For future economists and managers it is equally important to know that ecological problems and risks are predominantly the deed of the rich minority of the world created by their local activities, mainly the consumption. Their effects, however, have results in the whole population. The worst of all are the citizens of the South who lack the means to cope with the situations. As for example, the results of the study carried out by Friends of the Earth in Great Britain and Scotland, show that the communities which do not have political and economic power will presumably become the dumping places and contamination (Stephens, Bullock & Scott, 2001). Similar knowledge about the situation of the nature and environment can be gained through the socio-scientific courses. Furthermore, the feeling of responsibility for such a state shall be strengthened and that could cause taking the responsible statements and decisions regarding the economic aims and fulfilment of the working tasks so that they consider the natural and environmental values.

We agree with the statement that the environment does not have the value which would cover its factual or existential value (Smolková, 2004). Nowadays, the prior place is taken by economics creating the conditions for meeting various needs of people, enable increasing the quality of life, and that is the promise for the more quality life. The more demanding need is to pay attention to forming the environmental consciousness and ecological responsibility of future economists and managers. Regarding this, it is advisable to implement the courses such as Ecophilosophy, Environmental Philosophy and Environmental Ethics within the other socio-scientific courses. It becomes an essential field of Entrepreneurial Ethics. Even if this course has not been in the first places of the university curriculum within the preparation of future economists and managers, or they have not been implemented at all, there are no doubts that they play a crucial role when strengthening environmental consciousness and ecological responsibility of future economists and managers.

Ecophilosophy is an environmentally oriented philosophy formed at the end of 20th century as a response to the threatening ecological crises. It focuses on the study of basic philosophical baselines and value orientations of Man in relation with the nature. Its task is to clarify the value of the nature as the relation of the nature or environment to the need to sustain the human life on the Earth. Its actual task is to critically analyze the global environmental problems, risks and threats which our society faces. At the same time, it points at their causes and effects for Man. One of the reasons is the expanding production and consumption in a new global environment with a decrease of natural sources. It is connected also with the need to present the culture not only as the multidimensional, socially and historically phenomenon of the social life but mainly as the artificially constituted being within the nature, non-biological system depended on the nature but which opposes the nature, at the same time. In such a connection, Ecophilosophy should clarify the dualism of the nature and culture. The culture should be interpreted as not only subordinated to the nature but also as the threat for Man and nature coming from the anti-natural orientation. Nowadays, Ecophilosophy critically looks at the globalizing culture, global culture or planetary culture connected with the world changes and culture for the market. At the same time, it critically interprets the fact that the global culture takes a significant part in the world devastation. In such a world the power of Man over nature leads to the state in which the nature disappears from the human experience. We can agree with H. Juvin that the globalizing culture has been such tightly connected with economics, so that the economics is nowadays a necessary condition for unlimited growth and unsustainable suicidal power. As he states: "Our culture is a culture of unlimited growth, leaning on our technological almightiness

as an unprecedented reason of the separation from the nature.“(Juvin&Lipovetsky, 2012, p.123)

One of the tasks of Ecophilosophy and Environmental Philosophy is to point at the fact that globalizing culture – global culture, regarding its anti-natural and antihuman character and the disagreement with the idea of sustainable life, is considered as the threat. In such a connection, economy is regarded to be anti-natural as it supports the development and students should realize the demanding need for the reform in order to provide sustainable existence.

Explicitation of evolution ontological overview in Ecophilosophy or Environmental Philosophy is a presumption of the changes in approaches of people towards nature, understanding of environmental protection as well as the moral decision making process. As a result of realizing a value of environment as well as the fact that Man is existentially dependant on natural ecosystem, there is an assumption that professionals in the fields of economics and management are able to gain responsible approach towards environment and strive for its sustainability for further generations.

Apart from the already mentioned courses, Environmental Ethics, as one of the applied ethics, serves as the reaction for the above mentioned issues. It has been developed altogether with particular environmental problems. This applied ethics puts a smaller point at ontological problems in terms of building the theory of values and its broader attention is put to the questions such as: is it possible to build sustainable models of such a society which would meet the needs of people without threatening and limiting the possibilities of future generations to meet their needs. Apart from this, it focuses on ethical relations of Man towards non-human natural entities. Currently, it tries to critically reflect the global environmental problems and environmental crisis. The global environmental problems are connected with the global threat of environment caused by Man. It focuses on irresponsibility of entities in a new global environment that “unreasonably” spend natural sources due to the fact that their main attempt is to reach unlimited economic growth. It also critically points at the growing material consumption with attempts to reach economic growth as well as exponential growth of human population. These processes lead towards breaching some of the planetary systems, towards the environmental crisis which proves the fact that people live irresponsibly at the cost of other people, they do not fulfil their bounds and they are not responsible towards the nature (Svitačová et al., 2014). An important task of Environmental Ethics is to regulate all the activities in a new global environment so that they were connected with the moral responsibility of the entities for themselves, the others and eventually, for the nature due to the fact that the responsibility for the nature is hidden in the relationship of Man with his living conditions. The truth is that the majority of citizens do not consider the moral regulation essential regarding the sanctions disposed by the ethics. Yet, we think that Environmental Ethics reflecting the actual challenges in a new global environment can significantly strengthen the environmental consciousness and environmental responsibility of not only economists and managers but every person. Furthermore, we can hope that in the future we can reconsider our understanding of nature, relationship towards it and then he will be able to treat it with the bigger respect and humbleness.

4. Conclusion

The fact is that the modern civilization threatens the nature and thus also itself. The answer for the question of U. Beck stated in the introduction whether the key civilization qualification of the risk society starts to deal with fear and uncertainties, is negative. First of all, it reveals that it is inevitable to reverse this state and build a sustainable society which does not threaten the natural presumptions. Thus, we agree with the answer that this state becomes the challenge for

educational institutions which should strengthen environmental consciousness and ecological responsibility of their students and lead them towards building a sustainable society. Today, even more demanding than yesterday, it is necessary to warn people nowadays that we depend on environment and nature.

Educational institutions focusing on preparation of economists and managers for the practice in a new global environment should be flexible and react on the challenge considering the status quo of the ecosystem and environment. It is obvious that currently the preparation of these professionals cannot be seen only from the point of gaining the most recent professional knowledge from the field of economy, management, finance, microeconomists, business management, etc. Regarding the anti-natural cultural evolution pointing at irresponsible approach of people towards the nature, exploitation of natural sources, waste disposal, and with the aim to realize the finiteness of ecosystem, limits of urbanistic and industrial expansion and finally limits of sustainable conditions for future human and non-human beings, we appeal for strengthening their environmental consciousness and ecological responsibility. We cannot forget that it will be them whose task will be to create the conditions for quality life for us and for the future generations.

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Impact of National Apiculture Programmes on Beekeeping Sector in Slovak Republic

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Abstract

Beekeeping plays an important role in European agriculture, not only due to the production of apiculture products, such as honey, wax, pollen, royal jelly but it also contributes to this sector through pollinating crops and developing rural areas. Despite the fact that honey bees play an essential role in agriculture, there has been a decreasing trend in bee population connected with Colony Collapse Disorder which can affect food security in the European Union. Since 2007, the EU has been supporting this sector through national apiculture programmes, including technical assistance, control of varroosis, rationalisation of transhumance, laboratory analyses, restocking beehives and applied research programmes. Each member state can apply for this support, however the budget is allocated according to the number of beehives in each country. Slovak Republic is actively engaged and in 2017 the European Union is planning to allocate around 589 000 euros into the Slovak beekeeping sector. The objective of this paper was to examine the influence of national apiculture programmes on Slovak beekeeping sector. In order to obtain primary data, the questionnaire survey was conducted in 2016 on the sample of 223 Slovak beekeepers. Based on the results, the majority of beekeepers have used this support. The most frequent type of support was rationalisation of transhumance (32.29 %) and technical assistance (26.63 %).

Keywords: beekeeping, EU support, apiculture programmes, Slovak Republic

JEL Classification: Q01, Q13, Q18

1. Introduction

Authors Klein et al. (2006) utter that *Apis mellifera* – honeybee is the most important pollinator of monocultures all over the world. According to Food and Agriculture Organization (2011) from economical point of view, bee is considered as important insect not only for producing honey and other bee products but also for pollination service of crops that represents approximately one third of global food production. Each year this pollination service is valued around €20 billion in Europe and therefore significantly contribute to agriculture. Moreover, honey bees are considered as effective pollinators due to their ability to fly relative long distance and their sophisticated foraging behaviour. In Europe, around 80 % of wild plants depend at least partly on pollination (ECPA et al., 2011). Any reduce in population of bees will decrease pollination and in future it may have a certain ecological and economic consequences involving instability of ecosystem, food production and food security (Opera Research, 2010). Another authors claim that worldwide decrease in diversity of pollinators have initiated global concerns about so called “pollination crisis” (Tylianakis, 2013; Laurent et al., 2016). Since 2007 several publications and fora have reported high mortalities and bee diminishing worldwide, in Europe mostly involving winter mortalities exceeding 30 – 40 % annually and appearance of the new phenomenon “colony collapse disorder” in the USA (European Commission, 2014). Many beekeepers and scientists have reported significant colony losses, however no official data were available. Therefore, the European Union is fostering production and marketing of apiculture

products through several national programmes in order to reverse decline of bee population. Many beekeepers take it positively and as a tool for protecting bees, their health and population (Opera Research, 2013).

1.1 National apiculture programmes

Under above mentioned circumstances, the European Union created national programmes in order to sustain production and improve general conditions for marketing of apiculture products. Each Member state can create national programme for improving its beekeeping sector. The Union will refund 50 % and the rest 50 % of funding is covered by each member state (Chlebo, 2017; European Commission, 2013a). It is a form of direct support in beekeeping sector for both for fostering beekeepers as well as for the whole agriculture as it sustains pollination services. Budget of these programmes is allocated among these measures:

- varroasis control,
- technical assistance,
- rationalisation of transhumance,
- hive restocking,
- applied research,
- honey analysis.

(European Commission, 2013b)

For the next three years period 2017-2019, the national apiculture programmes support following measures:

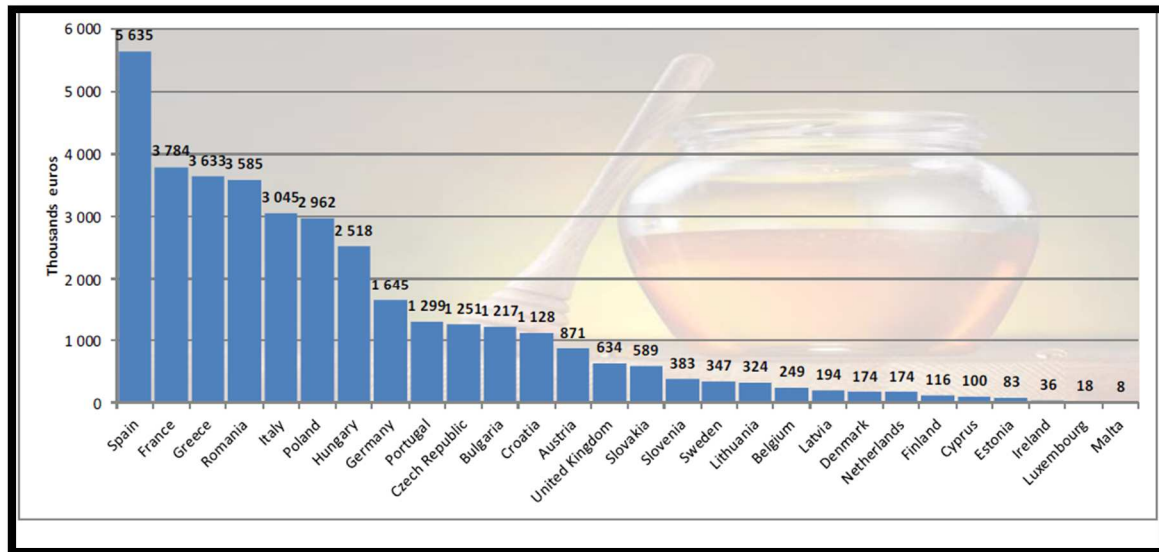
- technical assistance,
- combating beehive invaders and diseases,
- particularly varroasis,
- rationalisation of transhumance,
- analyses of apiculture products,
- restocking of hives,
- applied research and product quality.

(European Commission, 2017)

1.1.1 National apiculture programme in Slovak Republic

In Slovak Republic, the national apiculture programme is implemented through the legal document called “Národný program stabilizácie a rozvoja slovenského včelárstva” (NP, The National Programme of the Stabilisation and Development of Slovak Apiculture) for the years 2017-2019. The main objective is to change the structure of sector. Beekeeping sector in Slovak Republic is characterized by low number of professional beekeepers and by high age of beekeepers in average. Furthermore, it focuses on consumers, as they possess only few information about this sector as well as on youth and their education in this field. In addition, it involves goals connected with all supported measures in order to increase number of hives and improve the quality of Slovak honey. Budget allocated in Slovak Republic for 2017 (see Figure 1), 2018 and 2019 is 589 423 euros. (European Commission, 2016a; European Commission, 2016b).

Figure 1: Budget Allocated by Member State for 2017



Source: European Commission, MS NAP, 2017

2. Data and Methods

The objective of this paper was to examine the influence of national apiculture programs on Slovak beekeeping sector. Submitted paper was elaborated by using both secondary and primary sources. Legal documents such as regulations and reports of European Commission and Slovak Republic as well as literature at home and abroad devoted to this issue served mostly as secondary sources. Primary source was based on the online questionnaire survey, which was conducted with Slovak beekeepers and realized via survio.com. The questionnaire was distributed through social media and emails within the period of January – February 2016. Obtained sample is 223 respondents. According to Table 1, the majority of respondents were beekeepers operating as physical person with 1 – 100 hives. Experience length varies from 1 year to 40 years.

Table 1: Profile of Respondents

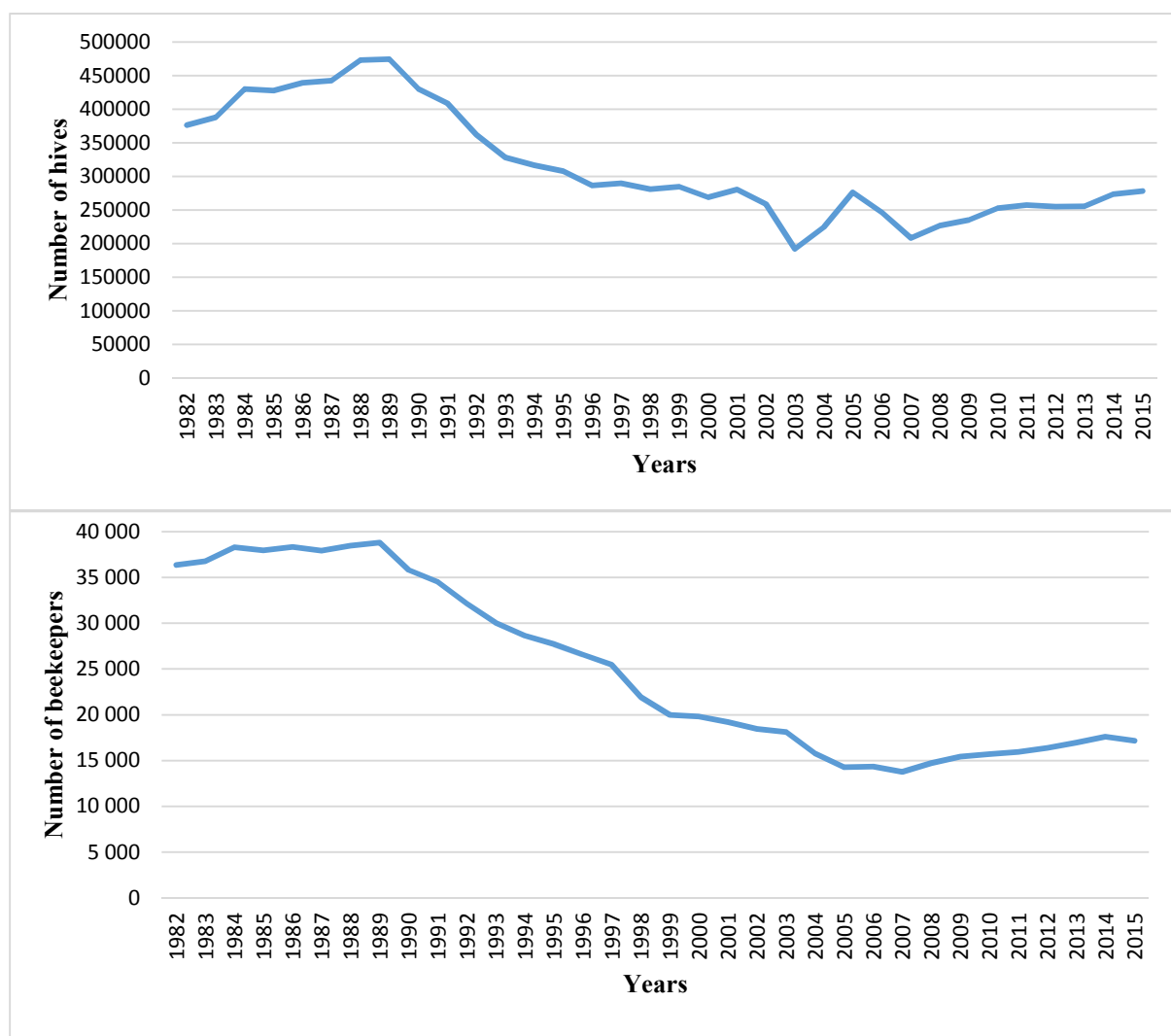
Form of Business	
Physical person	95,96%
Independent agriculturalist	1,79%
Family business	1,79%
Legal entity	0,45%
Length of Experience in Beekeeping	
1 - 10 years	38,12%
11 - 20 years	17,49%
21 - 30 years	17,94%
31 - 40 years	17,49%
41 - 50 years	6,28%
more than 50 years	2,69%
Number of Hives	
1 - 20	52,47%
21 - 50	30,04%
51 - 100	14,35%
101 - 500	3,14%
more than 500	0%

Source: questionnaire survey, own processing

3. Results and Discussion

Slovak Republic provides proper conditions for beekeeping sector as it has rich and diversified forests, meadows and agricultural crops. According to Figure 3, until the Velvet revolution (1989) beekeeping sector had been thriving and both number of beekeepers and hives were rising. Afterwards, a sharp fall had been noticed until 2007, when Slovak Republic started to receive support from European Commission in a form of national beekeeping programmes. It can be stated that situation has been stabilised and there can be seen a slow recovery is seen both in number of beekeepers and hives.

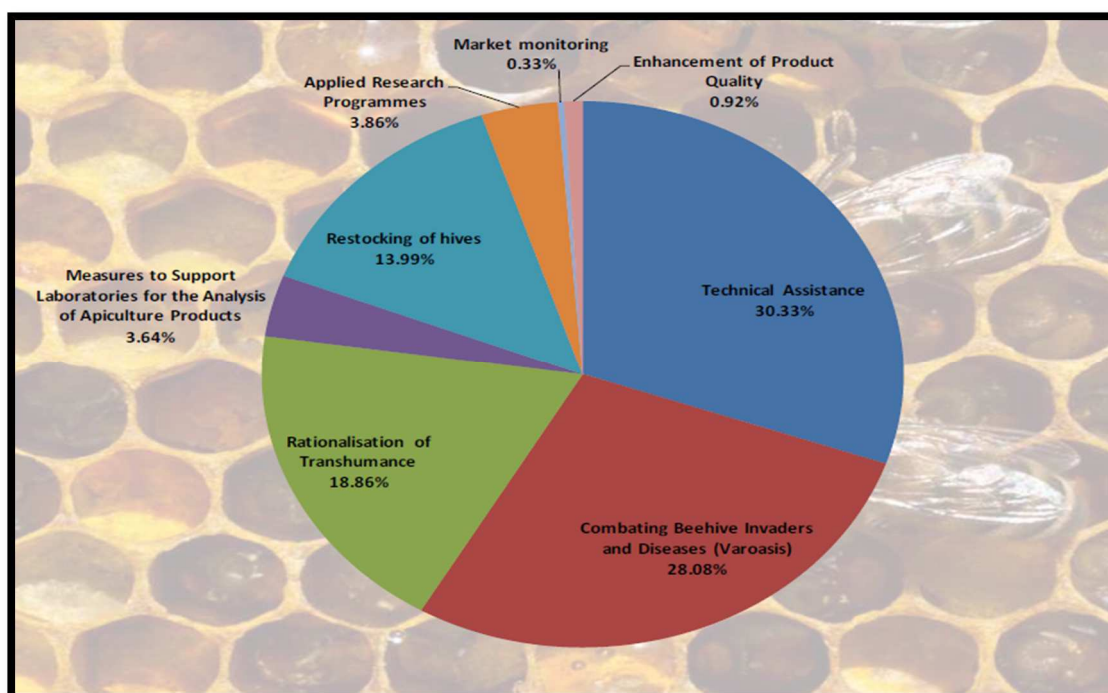
Figure 2: Development of Beekeepers and Hives in Slovak Republic



Source: European Commission

European Commission supports several measures in apiculture sector and in 2017 the most funded measures are: Technical assistance (30.33 %), followed by Combating beehives invaders and diseases – Varroasis (28.08 %) and Rationalisation of transhumance (18.86 %) (see Figure 3).

Figure 3: Budget Allocated by Measure for 2017



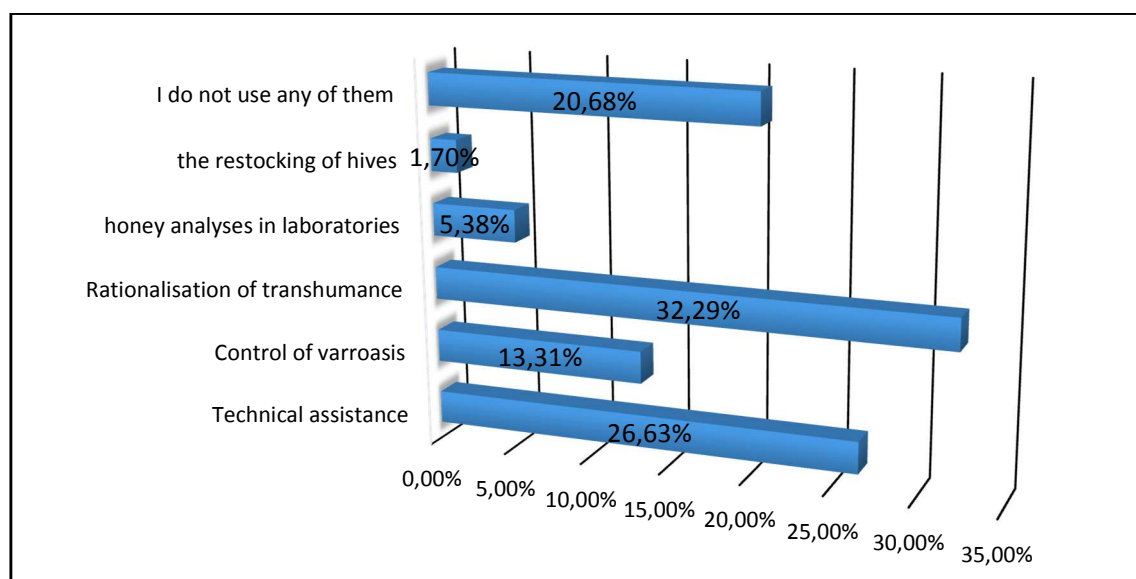
Source: European Commission, MS NAP, 2017

According to Table 2, in 2015/2016 European Commission allocated approximately 1 million Euros to Slovak beekeeping sector. The highest funding was provided for Technical assistance, Varroasis control and Rationalisation of transhumance. In comparison to results from questionnaire survey, it can be stated that beekeepers mostly applied for these three measures, (see Figure 4). Around 20.68 % of respondents do not use any of them.

Table 2: Budget Allocated by Measures for 2015/2016 in Slovak Republic

Measures	Volume
Technical assistance	553 999,32 €
Varroasis control	394 571,24 €
Rationalisation of transhumance	70 669,86 €
Hive restocking	44 930,14 €
Honey analysis	1 669,39 €
Applied research	31 420,70 €
Total	1 097 820 €

Source: Beekeeper – Slovak beekeeping Journal

Figure 4: Subsidy Forms

Source: questionnaire survey, own processing

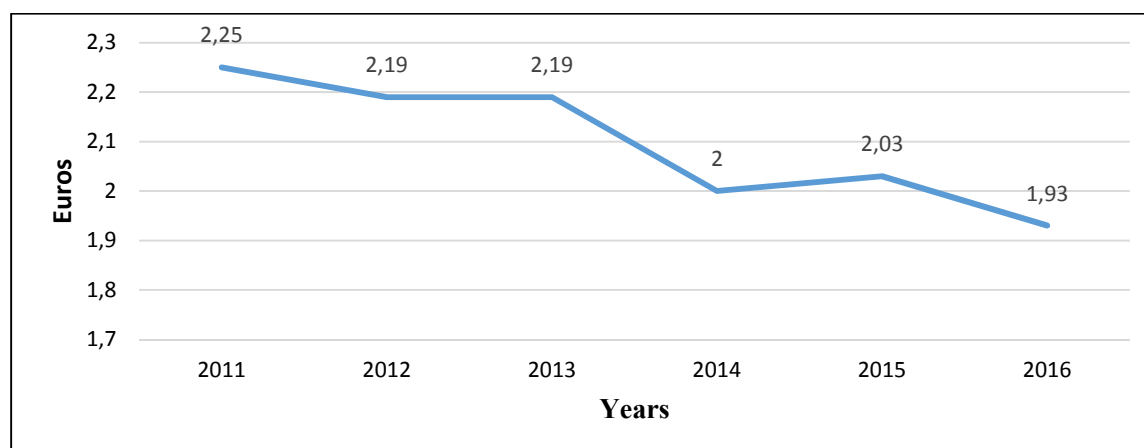
Before mentioned support was created to increase the number of hives as well as foster honey production. According to Table 3, within the years 2013/2015 the honey production in Slovak Republic increased by approximately 10 % in total. The positive changes were recorded in all counties. The highest increase was in Žilina county (+ 20.9 %). In case of hive numbers, the highest increase was again in Žilina county (16.8 %). The total increase was + 6,7 %.

Table 3: Changes in Honey Production and Number of Hives within the Years 2013-2015

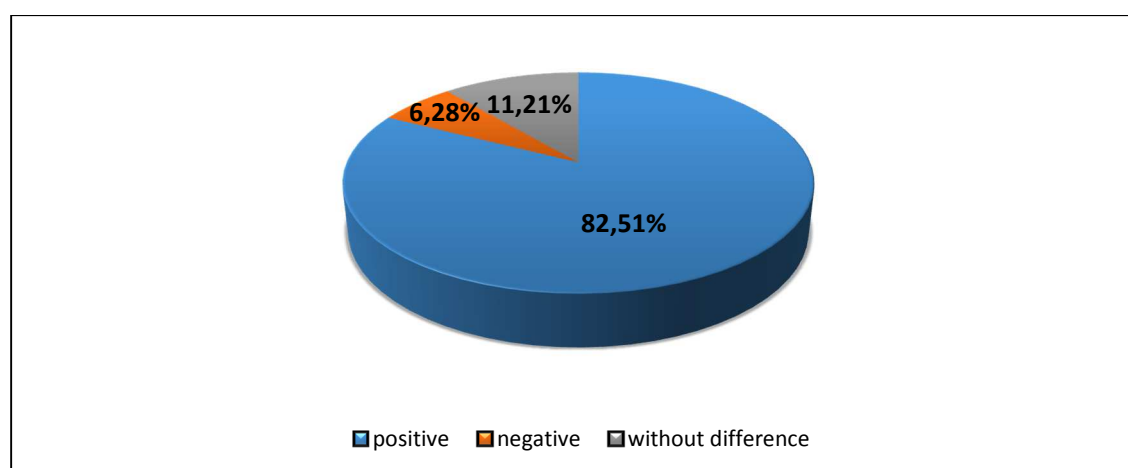
County	Total production in kg 2013	Total production in kg 2015	Δ%	Number of hives 2013	Number of hives 2015	Δ%
Banská Bystrica	702 862	796 629	+13,3%	46 578	49 385	+6,0%
Bratislava	150 797	170 334	+13,0%	9 240	9 830	+6,4%
Košice	573 424	609 320	+6,3%	36 201	37 377	+3,2%
Nitra	794 680	891 428	+12,2%	46 337	49 806	+7,5%
Prešov	517 633	558 099	+7,8%	36 072	38 854	+7,7%
Trenčín	351 352	384 709	+9,5%	23 692	24 278	+2,5%
Tnava	406 354	423 405	+4,2%	22 676	23 359	+3,0%
Žilina	382 347	462 173	+20,9%	25 782	30 120	+16,8%
Total	3 879 449	4 296 098	+10,7%	246 578	263 009	+6,7%

Source: Central register of hives

Besides support from the European Union, Slovak Republic provides support for pollination services, which is paid to each beekeeper if they apply. Most beekeepers are members of some organisations and generally, these organisations carry responsibility. This type of support is paid backwards and it strictly depends on number of beehives registered in Central register of beehives in Liptovský Hrádok. Figure 5 illustrates development of government subsidies for pollination service per hive. Each year the amount of support is lower than in previous year and there is a possibility that it may be cancelled in future. Currently, this type of support is paid only in Slovak Republic and the Czech Republic. According to questionnaire survey (Figure 6), the majority of beekeepers (82.51 %) perceive it in positive way mainly because it covers part of their costs. Nevertheless, small proportion of them (6.28 %) have negative attitude.

Figure 5: Government Subsidies for Pollination per Hive

Source: Slovak Association of Beekeepers, own processing

Figure 6: Subsidy for Pollination Service

Source: questionnaire survey, own processing

4. Conclusion

In conclusion, the European Union has been implementing beekeeping programmes since 2007 in order to support honey production and marketing as well as stabilise situation in beekeeping sector. The main reason was huge loss of bees in many European countries. Slovak Republic has been successfully using it and in 2017 is going to allocate 589 423 euros to several measures among beekeepers. Beekeepers mostly apply for technical assistance, varroas is control and rationalisation of transhumance. It is obvious that support from the European Union, which is implemented through beekeeping programs, has significant impact on apiculture sector in Slovak Republic. Firstly, since 2007 the number of both beekeepers and hives is stabilized and slowly rises. Secondly, within the years 2013-2015 the Slovak production of honey in all counties had a positive tendency and overall production increased approximately around 10 %. Beekeepers have better equipment, new hives and can combat with varroas is easier then before. Moreover, Slovak Republic provides additional form of subsidies to all beekeepers who will apply for. It is known as subsidy for pollination service and is paid per hive. In 2016, Slovak Republic paid 1.93 euro per hive. It is a one of the possible ways, how to support this sector.

Recommendations

Beekeeping programmes represent successful tool for stabilising apiculture sector as well as for supporting and fostering general conditions for production and marketing of apiculture products

in the European Union. Nevertheless, we recommend European Union to focus more on bees protection regarding pesticides used in intensive agriculture especially neonicotinoids and complex pesticides mixtures as it represents a huge threat for bees and sector in future. More funding should be provided to applied research and studies regarding pesticides toxicity.

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Analysis of Main Factors of Food Customer Behaviour

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Abstract

Participants of the food commerce chain have to take into consideration the continuous change of customer needs. In an ongoing study they can follow the development of the consumption process, from the needs and desires via attitudes, preferences, and possibilities, up to the purchase and consumption. In a longer term, depending on their satisfaction, and an impression of low shopping risk, customers will return, becoming loyal to the firm they believe in. Analysing how people purchase, allows companies to create more effective marketing strategies, attributing more attention to the shopping experience itself.

Our survey was carried out with a structured questionnaire completed by 300 individuals. We could reveal the main characteristics of shopping habits, preferences, and factors influencing customers' decisions. The research was completed under the circumstances of an emerging market. Therefore we assumed incomplete assortment on the market, with unexpected appearance of new competitors. The need to intensify the national food production, also the development of logistics facilities and infrastructure is urging. Retail companies should offer appropriate conditions to be able to draw attention to their products, in order to attract new and also loyal customers to ensure long term presence on the market.

Keywords: customer behaviour, emerging market, food customer, shopping experience

JEL Classification: D12, M31, O55, Q13

1. Introduction

In recent years consumer research is very much in the focus of marketing. A better understanding of how consumers make their decisions on purchasing products and services, and identifying what are the main factors of these decisions may lead marketers to optimise their efforts on providing better conditions for purchase. Marketing managers have to ask simple questions:

- Who ? Who are the participants of purchases? Who makes the decision?
- What? What is the subject of the purchase? What products/services are preferred?
- Why? What is the motivation behind the purchase?
- How? How do consumers go through the process until reaching a decision? What are the consumers' typical habits?
- How much? What is the quantity of purchase?
- When? We would like to know the time (day/week/month/season) and frequency of the purchase.
- Where? What sort of shop (market, small local shop, supermarket) they prefer?

These questions may seem easy, but it is very difficult to answer them thoroughly. For marketers it is essential to become familiar with the thoughts of the consumer, understand, predict and intervene in the purchasing process. (Józsa, Piskóti, Rekettye & Veres, 2005)

1.1 Interpretation of consumer behaviour

The final goal of the consumption is to fulfill the needs. Consumers are continuously forced to make decisions. With scarce source of income they have to decide which needs can be realized and which ones should be delayed for shorter or longer period of time or even refrain from consumption. According to Farkasné & Molnár (2007) the chosen alternative forces the consumer to give up the first alternative. In economy “the alternative cost of making any choice is the value of the choice we give up for the chosen alternative”. The real decision about the actual purchase stems from internal attitude, esteems with useful properties of goods, personal income and prices. Personal income together with prices on the market influence and limit the possible choices. Therefore because of the limits of the income and prices, environmental factors being part of the macro or micro environment cannot be ignored either. Only financially sound needs become demands on the market. (Farkasné & Molnár, 2007)

Consumer research as an independent discipline is rather young. The theoretical basis of the discipline was established by economists, psychologists, anthropologists and sociologists in the 1960's. Still new models and approaches arise as researchers tend to deepen their knowledge about the motives controlling human behaviour. Although consumer research originated from economics, it is breaking away from it, but at the same time it is converging to social and behavioural sciences. (Hofmeister-Tóth, 2014)

Food consumption is a particularly sensitive area with direct and indirect connection to self sustainment, linked to biological, social, cultural processes. It is one of the most complex human behaviour. According to Lehota (2001) the main factors influencing food consumer behaviour are:

- Biological factors (sensory perception, diseases, individual sensitivity);
- Economic factors (the rate between prices and income affecting the structure of food consumption, quantity, composition);
- Psychologic factors related to developing an image, acceptance or rejection of food;
- Socio-demographic factors affecting social embeddedness (primary, secondary and reference groups, status, role in the family);
- Cultural factors as part of cultural anthropology (learned values and habits integrating individual, social and psychologic factors).

1.2 Theories of consumer behaviour

From simple early approaches to recent multi-factor processes there is a wide range of theories trying to understand and predict the consumers' behaviour. Although they simplify reality, the aim of these models are:

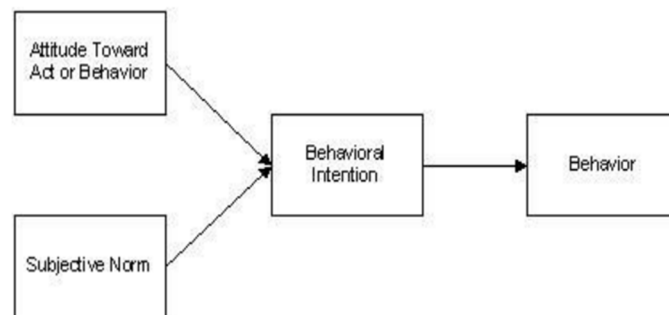
- to describe interrelationships between the factors (structural models)
- to put emphasis on the decision-making and communication process (process models)
- to try to merge these two components (total models)

The early S-R (Stimuli – Response) model showed purchase as a simple response given to an external stimulus, considering the customer as a “black box”, with unknown internal influencing factors or processes. Later more emphasis was put on understanding the human factor, which appeared first as the S-O-R model, with an “O” for “organ”. We have to mention the AIDA formula among the simplest communication-based models as well. The four steps of this theory are: Attention→Interest→Desire→Action. (Józsa et al., 2005) Another incomplete notion was created by Nicosia in 1966, explaining purchase as a one-sided influence between

the company and the customer, but mentioned attitude, motivation and experience as important factors of consumer behaviour, creating the base for researchers to improve on the theory.

The evolution of a theory can be demonstrated through the example of one of the first models on consumer behaviour “The Theory of Reasoned Action” (TRA, Figure 1). The model was created by Fishbein and Ajzen in the early 70’s. Their theory pointed out that intention to perform a certain behaviour precedes the actual behaviour. The authors found that this intention, named “behavioural intention” is determined by “attitude to behaviour” and by “subjective norms”.

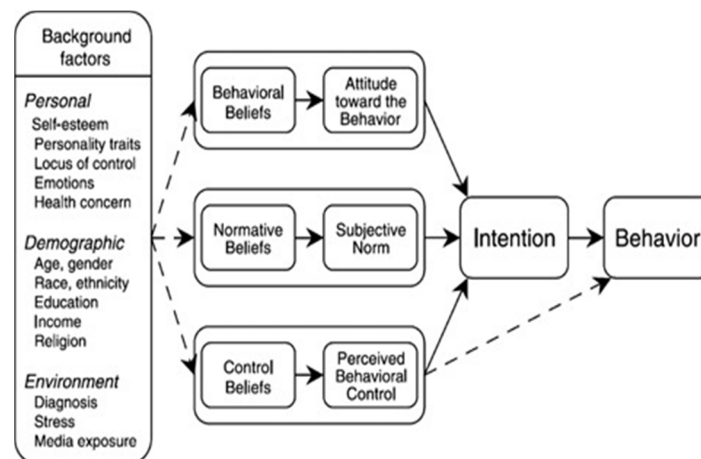
Figure 1: The Theory of Reasoned Action (Fishbein & Ajzen, 1975)



Source: https://is.theorizeit.org/wiki/Theory_of_reasoned_action

This early theory lacked various factors affecting the actual behaviour therefore in 1985 Ajzen introduced a more advanced version called “The Theory of Planned Behaviour” (TPB), shown in Figure 2. This model introduced “perceived behavioural control” as the third component of behavioural intention. By this, non-volitional behaviours could be covered for predicting more precisely behavioural intention, also actual behaviour.

Figure 2: The Theory of Planned Behaviour (Ajzen, 1985)

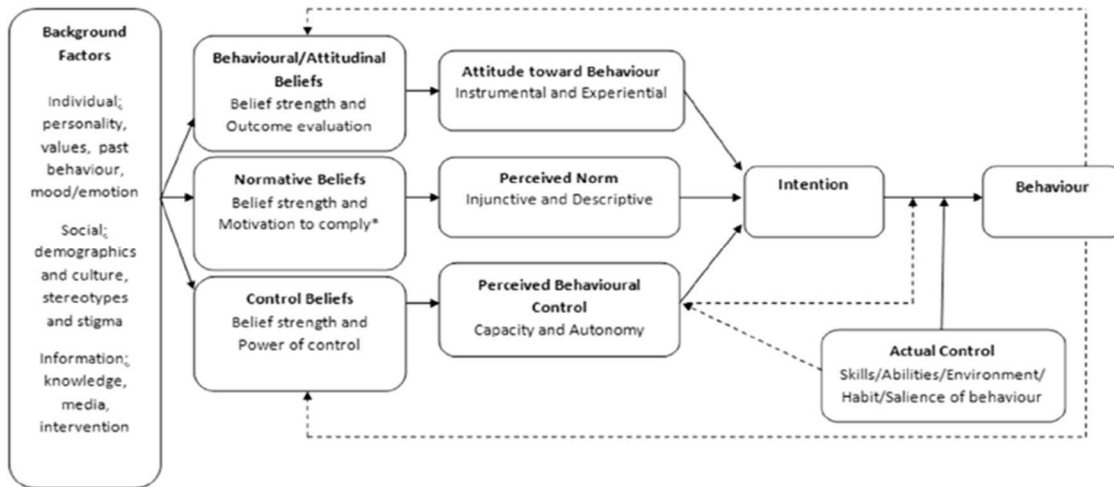


Source: <https://www.researchgate.net/figure/227764193>

The theory was widely used during the following two decades, but still it was criticised of its base on cognitive processing and ignoring the role of emotion. However this version was successfully applied in studies, especially focusing on health, also on food consumption.

The last modification of the model was published in 2010 named “The Reasoned Action Approach”, a more complex, multifactorial explanation of human behaviour, distinguishing more control mechanisms, even post-behavioural feedback affecting basic beliefs.

Figure 3: The reasoned action approach (Fishbein & Ajzen, 2010)



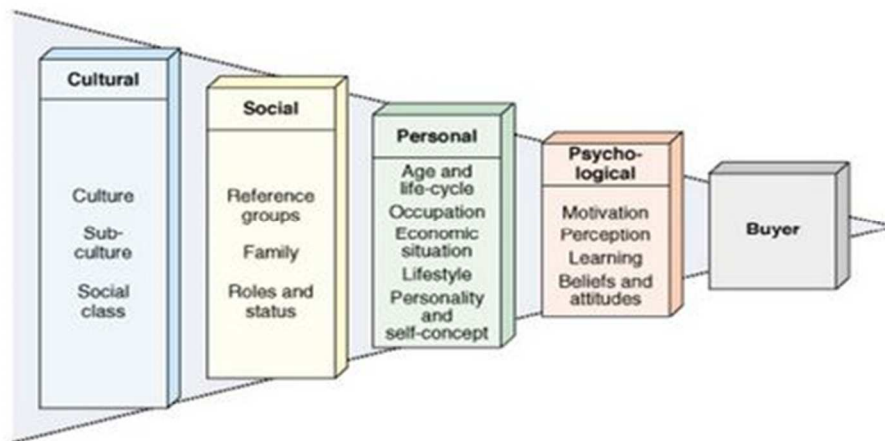
Source: <https://www.researchgate.net/figure/296193436>

George Katona introduced the need to examine psychological influences to consumer behaviour. As the founding father of “behavioural economics” he argued and influenced economists from the 1950’s pointing out the insufficiency of a pure economic point of view and the need to include psychologic evaluation. His theory also showed the importance of multidisciplinary approach. (Hosseini, 2011)

By Philip Kotler’s definition: consumer behaviour is the study of how individuals, groups and organisations select, buy, use and dispose of goods, services, ideas, or experiences to satisfy their needs and wants (Kotler & Keller, 2006). Studying consumers provides clues for improving or introducing products or services, setting prices, devising channels, crafting messages, and developing other marketing activities (Kotler et al., 2008).

His summary work showed the complexity of the factors influencing consumer behaviour. He found it important to understand the endogenous (personal and psychological) and the exogenous (social and cultural) components driving the actual behaviour.

Figure 4: Factors Influencing Consumer Behaviour (Kotler, 2006)



Source: <https://www.slideshare.net/DCAdvisor/dc-lecture-four-retail-customers-and-legal-and-ethical-behavior>

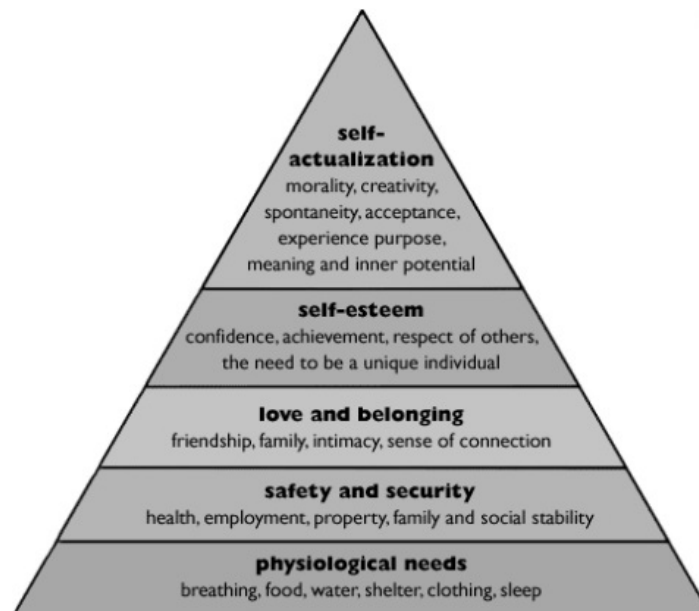
He also gave a theory to describe the five stages of the buying decision process. The starting point is problem recognition (internal, external), which drives the future buyer to the second stage: search for information turning to personal, commercial, public or even experimental

sources. After gathering the needed knowledge the third stage is the evaluation of alternatives, in combination of beliefs and attitudes leading the consumer to the direction of the fourth stage: to make the actual purchase decision. A higher perceived risk may postpone, modify or even avoid decision. Marketers must offer support and additional information to minimize the feeling of risk.

Kotler introduces a fifth stage as well: the evaluation of purchase by analysing post purchase behaviour, monitoring satisfaction, actions, product use and disposal. A satisfied consumer is more likely to purchase again and will tend to talk positively about the experience. But those experiencing dissonance may not return. (Kotler, 2006)

Evaluation of thoughts and needs appear from another angle in a conceptual model by Maslow. Known as the “Hierarchy of Needs” or “Maslow’s Pyramid” from 1943, Maslow approaches human needs putting them into hierarchical levels. From the basic physical and security (monetary) needs through social acceptance and personal esteem human needs reach the top of the pyramid: self-realization.

Figure 5: The Hyerarchy of Needs (Maslow, 1943)



Source: <https://blogs.warwick.ac.uk/amacgregor/daily/131015/>

From Maslow’s point of view food and the access to alimentation is part of the basic physiological needs. The first theory focusing on food consume was established by Pilgrim (1957). He introduced the importance of sensory factors related to food (e.g. taste, smell, appearance) combined with the physiological status of the individual (e.g. thirst, hunger or appetite), also psychological components, like former experiences, attitudes and beliefs. He emphasizes the importance of economic and social factors like prices, brands and other socio-cultural effects as well.

The aim of total models like the Howard-Sheth (1969) or the Engel-Blackwell-Miniard (1986) was to explain thoroughly the complexity, the interactions and feedbacks amongst components of consumer choice. These theories were criticised for being too complex to read, using too much variables and a number of assumptions, finding the models pre-scientific (Foxall, 1980). However the number of different models still indicate the need for a comprehensive interpretation of consumer behaviour.

2. Data and Methods

In order to test and give a report on customer decisions we carried out a qualitative research. Our questionnaire consisted of five introductory questions related to age, gender, family structure, education and occupation. Further structured questions were asked about the average everyday purchasing behaviour: who does the shopping, how they get information, where do they buy the products of their basic alimentary needs, what are the main motives of purchasing and how do they evaluate the importance of the elements they experience during purchase. To give a good approximation to this last question, we asked to evaluate the 13 given factors from 0 (not important) to 2 (very important). A +1 open question was asked about other opinions that can influence their decision. We conducted personal interviews using a paper-based method. The fieldwork was performed in various districts of Angola's capital city, Luanda, mainly on streets, avoiding proximity to shops or markets. The sampling size was 300 people using simple random sampling method. The survey is not representative. The data was processed, evaluated and demonstrated applying Microsoft Excel 2010 and Microsoft Word 2010 programs.

3. Results and Discussion

The aim of our research was to determine the main factors influencing customer behaviour. The majority of our respondents (male: 146; female: 154) belong to the young generation, according to the population pyramid of a developing country. 64 per cent of our respondents were between 20 and 40 years of age, only 27 per cent was over 45. 30 per cent of the respondents had a minimum intermediate level of educational attainment and 70 per cent of them started or finished elementary school.

The answers about occupation also demonstrated a young society, with students (22.4%), active workers (64.3%), unemployed people (11%) and pensioners (2.3%) shown in Table 1. The majority of unemployed respondents (29 of 33) were women, engaged in domestic work and raising children. The proportion of pensioners appeared to be extremely low because of the short life expectancy, the long lasting former wartime, also the lack of the pension system in the past.

Table 1: Distribution of Occupation by Age and Gender among Respondents

	Women						Men						Total
Age	20-24	25-29	30-34	35-39	40-44	45-	20-24	25-29	30-34	35-39	40-44	45-	
Student	15	13	6	2	0	0	14	12	4	1	0	0	67
Employee	7	6	7	6	6	18	5	4	7	6	6	16	94
Senior	0	0	0	1	1	6	0	0	2	2	4	9	25
Contractor	1	1	1	1	1	2	3	3	3	2	3	8	29
Casual worker	2	2	3	4	3	5	7	6	5	6	0	2	45
Un-employed	6	4	4	4	3	8	3	0	0	1	0	0	33
Pensioner	0	0	0	0	0	5	0	0	0	0	0	2	7
Total	31	26	21	18	14	44	32	25	21	18	13	37	300

Source: own research data, 2016

Table 2 shows that family structure in Africa is mainly traditional. Large, multi-generation families live together forming common households. It is traditionally usual that women are responsible for food supply. They make the decisions regarding the alimentation of the family (Table 3). There are much less modern families with only two generations and less children living together, separately from the large family. One person households are very rare, mostly foreigners working in the country or the few separated.

Table 2: Family Structure among Respondents by Age and Gender

Respondents	One-person household		Small family (3-5)		Large family (6 or more)		Total
Age (years)	women	men	women	men	women	men	
20-24	0	0	8	9	23	23	63
25-29	1	1	7	8	18	16	51
30-34	0	3	8	8	13	10	42
35-39	0	2	10	10	8	6	36
40-44	0	2	7	8	7	3	27
45 -	0	1	19	18	25	18	81
Total	10		120		170		300

Source: own research data, 2016

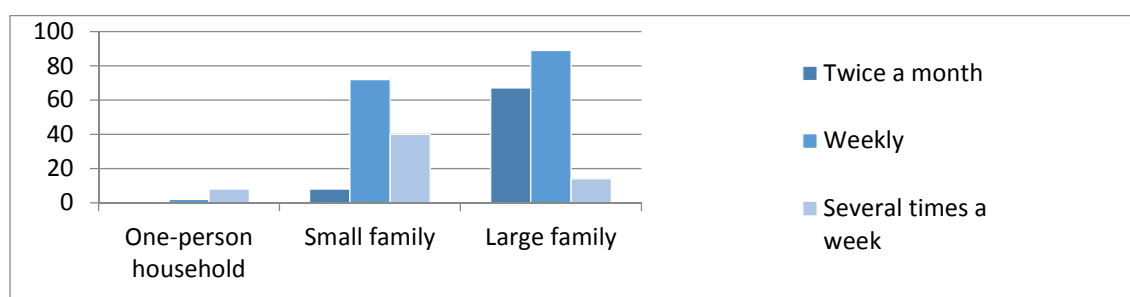
Table 3: Participation in the Shopping Process

	Women	Men	Family together	Total
Who's buying food?	181	36	83	300

Source: own research data, 2016

According to this composition of the society, we could measure the overall majority of women (60.3%) over men (12%) participating in the food purchase process. There is a significant presence of joint decisions too, (27.7%) including the growing importance of children involved. In small families roles are more equalized, decisions of purchase and shopping itself is more likely to be performed together from fulfilling daily necessities to large scale decisions. In Figure 6 we can observe that the frequency of food purchase also differs according to the size of the household. Large families are less likely to purchase frequently than small ones, and people living in one-person households prefer to go shopping more than once a week. We can conclude that family structure is an important factor regarding the frequency of shopping among our respondents. People living in smaller households tend to purchase more frequently.

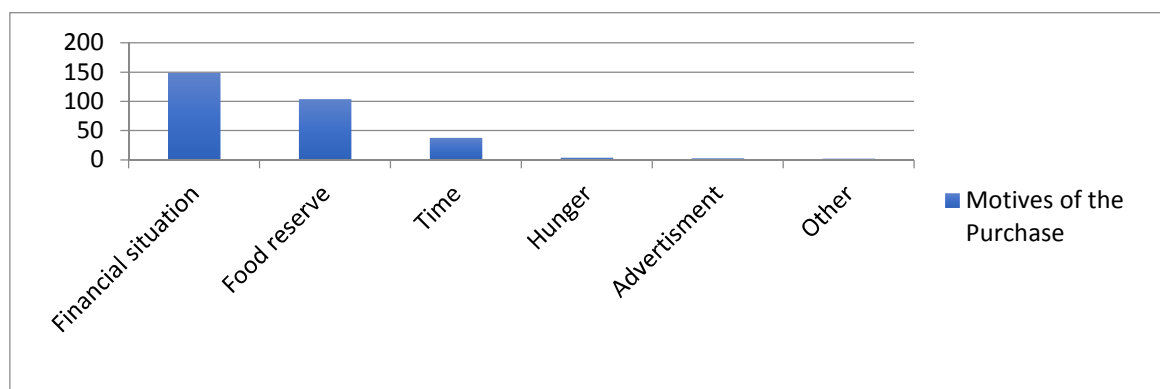
Figure 6: Frequency of Food Purchase by Family Structure



Source: own research data, 2016

According to Kotler (2006), motivation is an important endogenous component of consumer behaviour. To evaluate what are the main motives behind food purchase, we asked: what motivates your family to purchase alimentary products? Among the given answers we could identify the three most preferred: the actual financial situation, the decrease of food reserve and to have time for food purchase. The effects of actual hunger or advertisements are weak.

Figure 7: Motivation of Families to Purchase Alimentary Products



Source: own research data, 2016

The distribution of answers shown in Figure 7 points out the primacy of financial aspects in many families, putting economic factors above the need of food stock replenishment. This means that financial distress can cause weak food security for the families, as sometimes they cannot get the quality or even the quantity of food required. On the contrary, a favourable financial situation can lead to impulse buying, actually spending more than it was planned before.

Another aspect of purchase in order to make the right decision is the source of information. Among the given possibilities over 94 per cent of the respondents mentioned own experience, family members, friends or neighbours as the source of valuable information they believe in. Advertisements, leaflets, posters together could affect only 6 per cent of customers. The advertising market is weak, with less advertising time on TV and radio. Also a lower newspaper reading rate and limited access to the internet can be detected compared to developed countries. The result is the lack of information, the survival of old beliefs and preferences, also the loss of value they know not of.

We also analysed what sort of shops are the most preferred among our respondents. The answers are represented in Table 4 by the gender and education. The favoured options were markets and small local shops mainly among respondents with a basic level of education. Supermarkets and hypermarkets reached a higher per cent among higher educated respondents regardless of who participated in the purchase.

Table 4: The Place of Purchase among Respondents by Education

Place of Purchase	Education	Women		Men		Families	
		Elementary	Secondary/higher	Elementary	Secondary/higher	Elementary	Secondary/higher
Small local shop (cantina)		42	10	10	2	25	3

Market, street sellers	58	11	11	2	22	6
Supermarket	25	18	3	4	6	9
Hypermarket	5	12	1	3	1	11
Total	181		36		83	

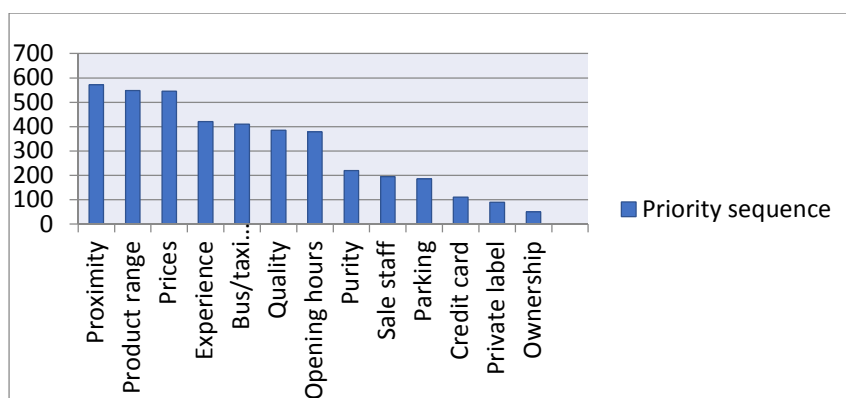
Source: own research data, 2016

Finally, respondents were asked about the importance of the given factors influencing the place of the food purchase. 13+1 viewpoints were given, and the participants could give zero, one or two points depending of individual importance. The results are shown in Figure 8.

The less important factors occurred to be the existence of an own brand and the ownership (home or foreign) of the shop. The possibility of paying with credit card was also a tail-end, which shows the poor financial literacy among respondents, representing real conditions in the country. The lower-middle sector of importance contains details like parking, purity of the shop and surrounding environment, also the performance of sale staff. In developed markets surrounded by serious competition none of these can be neglected. The low importance of these factors indicate a lower level of shopping culture.

The upper-middle sector contains properties like opening hours, nearby bus/taxi station, the quality of products and with the highest score in this group: former personal experience. At last, the most favoured attributes are: prices of the products, the product range to find everything needed in one place. On the top, our respondents considered proximity as the most important reason of their choice regarding the place of purchase. Considering the limited number of stores, the great distances, high product and transport prices, the limited information and time a customer has got, this sequence of preferences meet the reality of everyday purchase in Luanda.

Figure 8: Which Factors Influence your Decision of the Place of the Purchase?



Source: own research data, 2016

For the +1 open question some respondents gave answers about the importance of supervised playroom for their children, or other entertainments, like music in the sales area or the need for product tasting. Some pointed out the importance of operating air conditioning, customer service, or the presence of security service in the shop and in the parking area. These minority proposals are the answers of an experienced shopper, who can distinguish the pure buying process from a real good and complex shopping experience, showing the existence of a need for higher quality of service. We must highlight the fact that no one mentioned the lack of online purchase, the most evolving sector of developed economies. No one emphasized the lack of opportunity to find organic food on the shelves of retail stores as well.

4. Conclusion

With our survey we would like to demonstrate the actual state of retail food consumption of a developing economy, where social differences, the huge gap between social classes and the scarce income of the great majority of the population define consumption. Food is one of the most needed things among living conditions. The availability of food is essential to everyone regardless of age, gender, social class, or any other circumstantial elements.

Through our results we could demonstrate the majority of traditional families and the lack of one-person households. It is known, that family bonds are much stronger in African families, with large, multi-generation families living together and forming common households. This family model defines the roles of the members, giving the task of getting food to the wife of the head of the family. Purchase is concentrated mostly to the pay period. The families buy durable food one to four times a month in large packages, mostly in markets or local shops close to their homes, where prices are thought to be lower, and they don't have to spend more on transport. The main motive of purchase is to utilize the scarce financial sources the best way to avoid hunger, giving priority to basic alimentary needs. With high food prices and low income, this lower educated class of the society spends a much higher percent of the income on food. We could also reveal that customers do not have enough information to make a better decision, reducing the risk of purchase.

Purchase influencing factors like comfort, entertainment, possibilities of using modern financial solutions or environmental considerations have limited influence on the consumption, as most of the families cannot afford to consume in supermarkets or hypermarkets where these possibilities are available. However in a capital city of 6.5 million inhabitants there are a significant number of middle class citizens with small families and higher income who require better conditions for a really remarkable shopping experience.

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New opportunities and challenges for sustainable land management (SLM) in Hungary²⁰

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Abstract

Special literature sources have been discussing the concept of sustainability and the feasibility options only for about three decades. Sustainable development has several definitions; it is defined both in narrow and wider sense. The definition of sustainability is regarded inevitable because the sustainability of agriculture can be interpreted only within this fixed conceptual framework. Our study is primarily dealing with issues of sustainability in farming practices being peculiar to countries, regions of the European Union. In frames of current research we are providing the analysis of the ability to produce value added within agricultural sector, the intensity of farming, the non-renewable external input use, farm structure as well as the European-level relations being directed towards the preservation of land productivity.

Keywords: agricultural economics, value added, sustainable development, natural resource economics

JEL codes: Q01, Q10, Q24, Q30

1. Introduction

Sustainable development is a versatile and dynamic concept, which should primarily be regarded as a transformation process, closely related to local needs, conditions and priorities. (Mészáros, 2007) H. Daly argues that sustainable development is nothing else than achieving permanent social welfare without overburdening the ecological carrying capacity of our environment (Daly, 1991). There has been a generally accepted view that sustainable development is based on three basic pillars, namely on environmental, economic and social pillars. As regards Hungarian experts, Csete (2005) and Bulla et al (2006) have dealt with these dimensions of sustainability in depth.

The importance of environmental pillar comes from the fact that environment and ecosystems are inevitably necessary for our survival and meeting our needs in the long-term. Producing food is impossible without the vital elements, water and soil; there is no life without oxygen; therefore environment is a vital prerequisite for all of us. For the definition of the concept it cannot be disregarded that the natural resources are finite (Schumacher, 1989; Hardin, 1993; Daly, 1996; Meadows et al., 2004; Speth, 2008; Molnár, 2014; Káposzta, 2016; Molnár et al, 2017). Human consumption had already exceeded the acceptable limits by the end of the 20th century. (Lisányiné, 2011)

According to the definitions which put the emphasis on the economic pillar, the human activities focus on business and in the developed world economic expansion guarantees financial security for the population increasingly efficiently, although poverty still exists in the developing world. In other words, it ensures acquisition of goods for the man as a consumer, in addition to mere subsistence; thus people can spend major part of their income to meet their needs above their basic demands and everybody has access to public security and educational institutions – as public goods. Sustainable growth – in this sense – means a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Lisányiné, 2011)

The concept, which underlines the role of social pillar, says that it is inevitable for sustainable development and long-term stability to have a healthy and „reproductive” population; poverty, famine and wars should be ended; the diseases should be preventable (OECD, 2008) and people should receive proper education (Grant, 2010). Considering all these, Gyulai (2008) concluded that the main conditions of sustainability are as follows: realization of permanent social welfare; fulfillment of people’s basic needs; fair distribution of income from resources; creating equal opportunities; integration among sectors; sustainable use of resources considering also the carrying capacity, and guaranteeing the quality of environment.

While at the first Earth Summit held in 1972 in Stockholm the agenda basically included only environmental issues, the conference in Rio de Janeiro has recognized that it is not enough to address only environment-related problems because the Earth cannot be protected without reforming the economy and restricting economic growth. The summit in Johannesburg has shown progress again because in addition to environmental and economic issues, several social considerations have also been brought up. Following the Maastricht Treaty and the Cardiff Summit in 1998, another stage of the so-called Cardiff process is the Treaty of Amsterdam, which intends to strengthen the principles laid down in the Maastricht Treaty by ratifying the achievement of sustainable development as a community objective (Mészáros, 2007).

There was a slight shift in the process when only the social and economic issues were addressed at the Lisbon Summit organized on 23-24 March 2000 and the participants declared that the European Union should become the most competitive and most dynamic knowledge-based economy; it should be able to pursue sustainable economic growth with more and better job opportunities and greater social cohesion. (Schmuck, 2002) As a next step, the 6th Environment Action Programme of the European Union was implemented, which identified the following priority areas: climate change, preserving nature and biodiversity, environment and health protection, sustainable resource use and waste management (Mészáros, 2007)

The Lisbon Summit was followed by several environment forums. The European Council held a summit in Gothenburg in June 2001 where the missing third dimension - environmental protection – was built into the former strategic principles of Lisbon and the Sustainable Development Strategy of the EU was approved. The action priorities drafted by the community politics focus on integrated environment approach, more responsible management of natural resources, use of clean energy, improvement of transportation systems and land management. One of the main functions of Gothenburg strategy is that it initiates the elaboration of similar documents at national level and encourages the implementation of these requirements in the strategies of individual sectors. (Mészáros, 2007)

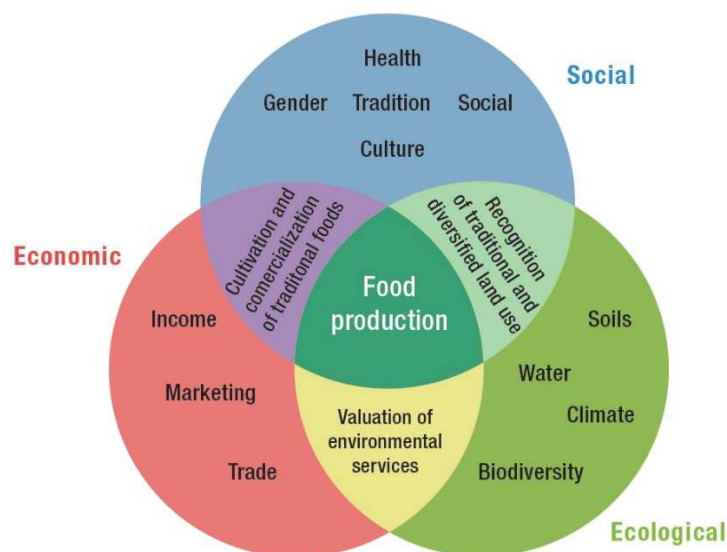
Among other things, the Gothenburg Summit also raised the issue of relationship between energy policy and sustainable development strategy. The European Council made an important step when it laid down the harmonization of economic, social and environmental policies as basic objectives and asked the Council – among other things - to go ahead with its energy policy

in this spirit. They have marked six areas, where the development was not sustainable. According to this the following areas require urgent actions: climate change; increased involvement of clean energy sources; environment health; protection of natural resources; transportations systems, area use; social exclusion, accumulation of wealth; and economic and social aspects of aging social groups.

Furthermore, the importance of regular monitoring and the development of indicators to perform monitoring has also been underlined. The report (hereinafter referred to as Report) titled „Sustainable development indicators to monitor the implementation of the EU sustainable development strategy”, which laid down the thematic framework for the list of indicators was issued in 2001. The Report offers a hierarchically structured thematic framework, which connects the six high-priority areas set up by the Sustainable Development Strategy of 2001 with several others, thus highlighting ten key topics, namely the following: 1 – Socio-economic development; 2 – Social exclusion, income distribution; 3 – Ageing population; 4 – Public health; 5 – Climate change and energy; 6 – Sustainable consumption and production; 7 – Natural resources; 8 – Sustainable transport; 9 – Good governance; 9 – Global partnership. (Mészáros, 2007)

According to some opinions, sustainable development is impossible. Daly (1990), ecological economist, defines sustainable development as follows: „Sustainable development means to achieve infinite social welfare without expanding beyond the ecological carrying capacity. Growth means that we are getting bigger and development means that we are getting better.” In his paper titled Sustainable Growth: An Impossibility Theorem, Daly argued that „it is impossible for the world economy to grow its way out of poverty and environmental degradation. In other words, sustainable growth is impossible. In its physical dimensions the economy is an open subsystem of the earth ecosystem, which is finite, nongrowing and maternally closed. As the economic subsystem grows, it incorporates an ever greater proportion of the total ecosystem into itself and must reach a limit at 100 percent, if not before. Therefore its growth is not sustainable. The term „sustainable growth” when applied to the economy is a bad oxymoron.” The three pillars of sustainability, their intertwining and interdependence presume problem solving beyond geographical and institutional boundaries. (Daly, 1990 quoted by Lisányiné, 2011)

Figure 1: The three dimensions of sustainability



Source: IAASTD (2009)

It can be concluded that the concept of sustainable development or sustainability has been examined by several experts from different approaches. The common feature in the approaches of sustainable development is that they all consider natural, economic and social factors. The other common feature is that every one of them urges to save resources and energy; to utilize local resources; to give priority to renewable natural resources; to minimize waste production; to prevent and reduce pollution; to encourage qualitative approach instead of quantitative and to respect and protect natural values. In the first years of the 21st century, not only experts and politicians deal with the concept of sustainability but it has become a widely known phenomenon and part of our everyday life. The most precise and most comprehensive definition has been offered by OECD (2001) which says that sustainability is a conceptual framework, that is the changing attitudes is a process; which means that the decisions require cooperation coordinated in space and time; and (last but not least) it is also an ultimate aim, meaning that the problems of humankind should be defined and sorted out. Such an aim is – among others – to protect the natural resources and environment and to eliminate diseases, poverty and unemployment. (OECD 2001 quoted by Lisányiné, 2011)

In order to know precisely if the development or an activity is sustainable, or if we go in the right direction, or which factors contribute to our welfare and which factors can be disregarded, we should be able to measure sustainability somehow. Measuring sustainability, however, will not offer any solutions in itself; the indicators used for measuring sustainability will not tell us what to do because they only show the status and the changes in status – the trend of development – and can help only in the definition of priorities. Stiglitz (2009) highlights and argues that it is time to change our views about economic growth and wealth of a nation.

2. The analysis of sustainability concerning EU Member States' farming practices

In what follows, we are aiming at preparing an analysis of the sustainability aspects of farming practice attributed to the 28 countries of the European Union based on a comprehensive database. The relevant data regarding agricultural output, input use, its value added productive ability and effect on the environment, are provided by the regional tables of the Eurostat sectioned by NUTS-2. We have to add that the above-mentioned Eurostat data have been completed in case of certain economies – Slovenia, the Czech Republic and Belgium – on base of information published by national statistical offices' and also EU's statistical nomenclature since these countries data – for undisclosed reasons – are not included in Eurostat tables.

As regards the parameters of current research, among variables describing agricultural land use and farm structure, we are applying the ratio of land utilized for agricultural purpose on regional level to the total area of the given statistical region (1), the proportion of arable land within the territory used for agricultural purpose (2) as well as the average farm size in hectares (3) and the territorial share of large-scale farms, which includes farms above 100 hectares of utilised agricultural area. Relying on these variables, we can describe the size and estate structure of the local agricultural sector within the given NUTS-2 region.

The role of livestock activities on regional level can be measured with the parameter of animal (livestock) density per 100 hectares (5), however, the agricultural sector's added value creating capability, the effectiveness of resource use and the sustainability of farming are measured by the following variables: the generated added value as a percentage of gross output (6), value added generated by the use of one Euro worth, extern, non renewable input (7) and the intensity of soil erosion by water in the examined region (8).

Table 1: Classification of soil erosion intensity by the rate of topsoil removal

Grade of erosion	Intensity of soil removal		Verbal assessment	NUTS-2 regions
	$mm \cdot ha^{-1} \cdot year^{-1}$	$t \cdot ha^{-1} \cdot year^{-1}$		
1	<0,04	<0,5	<i>no erosion or insignificant erosion</i>	(41)
2	0,04 ... 0,25	0,6 ... 3,0	<i>slight erosion</i>	(136)
3	0,26 ... 1,0	3,1 ... 12	<i>moderate erosion</i>	(59)
4	1,01 ... 4,0	12,1 ... 50	<i>severe erosion</i>	(6)
5	4,01 ... 16,0	50,1 ... 200	<i>very severe erosion</i>	-
6	16,0<	200<	<i>catastrophic erosion</i>	-

Source: author's calculations based on Zachar(1982) and Eurostat(2017)

Within agricultural inputs, farmland assets can be viewed as one of the most important and at the same time, renewable resources. Still, it has to be considered that topsoil is rather a partially renewable resource and thus the latter characteristic only emerges more clearly when the proper way of farming practise is being applied. The depreciation of soil structure is quite an inappropriate agricultural method from the point of view of preserving land's productive capacity since besides the decrease of nutrition providing quality, it can lead to the soil erosion provoked by water and wind as well. While due to technological capabilities, soil structure or even weak nutrition content can be nowadays cured relatively easily, over decades or centuries, the negative effects of erosion driven, thinning topsoil can largely and negatively modify the effectiveness of our agricultural production and significantly worsen the living conditions of future generations. Against this background, as a relevant part of the analysis of sustainable agricultural practice, we have to take a closer look at the question that at what extent the applied cultivating methods, estate structure, growing techniques, etc. can prevent soil erosion from becoming increasingly widespread. (Zachar, 1982, pp. 83-85., pp. 304-307).

Regarding temperature conditions, the length of growing season and precipitation characteristics, the rate of topsoil formation is between 0.25 and 1.5 mm per year in the agricultural areas of the European Union. Preceding data is typical of the most unfavourable, (cold or dry) while latter information applies for the best possible (warm and moist all-year round) conditions available. The estimated annual new topsoil formation is around 0.5-1.0 mm per year in the majority of cultivated lands (FAO, 2017).

On the basis of the foregoing, there are altogether 65 statistical regions within the European Union which can be ranked among the moderately or severely soil erosion stricken areas. In current regions, due to an inappropriate agricultural practice the rate of soil destruction equals or surpasses the regenerating capacity of soil which imposes a sustainability related threat extend over several decades or even centuries in the agricultural sector.

More than three quarters of the moderately or severely soil erosion stricken areas are located in Southern Europe: there are altogether 20 such regions in Italy, 9 regions in Spain, 10 regions in Greece, 5 regions in Southern France, 3 regions in Portugal, one at the Croatian coastline (Jadranska Hrvatska) and another one is the island of Malta. Soil erosion is similarly intensive in case of farmlands of 6 mountainous provinces of Austria and Slovenia. Within the United Kingdom, there are also 4 such areas in the rainy and mountainous Wales as well as Scotland. In Central Eastern Europe territories being moderately or strongly affected by soil erosion are

the South Transdanubian region of Hungary, Lesser Poland and also 3 further regions in Central and Northern Romania.

As regards some further 177 regions not listed, the average annual extent of soil erosion is typically stays below the limit of soil's natural regenerative ability so from this perspective, agricultural activities do not threaten land productivity in the long term.

The population density of the given area (9) can be taken in consideration primarily as a factor influencing the scarcity of land and at the same time, being independent of the local agricultural activity while still having effect on the latter. Regarding the immense, almost a thousandfold difference between the population densities of the least and most densely populated areas of the European Union, it is recommended to use the natural logarithms of regional population densities for direct comparison.

In our study, we have categorized energy use per hectare, use of fertilizers, pesticides and additional, depreciating fixed assets (belonging to the group of machines and buildings) as external, non renewable agro-economic inputs. These inputs are widely utilized by modern agriculture, however, the sector could not produce them itself – that is the reason why we call them external ones. It is important to note that the majority of these inputs (including energy use or considering the conditions of producing the necessary amount of fertilizers) derive from non renewable sources. The intensity of an agricultural activity as well as the sustainability of farming practice can be characterized with a parameter describing the magnitude of the created value through the use of a one Euro worth external input in certain areas. The higher the created value added compared to the utilized external inputs, the more beneficiary can be the given region's practice viewed from sustainable aspects.

Our data presented are available at a NUTS-2 regional level for year 2013 with the exception of a parameter that estimates the rate of soil erosion per hectare: latter data which refers to the total area of the EU, is listed in the tables of Eurostat as a result of a 2012 survey. In case of determining gross value added, gross output and external inputs we had to face the fact that in a couple of countries there had been no information for year 2013, so in order to complete the analysis, data from 2012 or 2014 were used additionally.

3. Cluster analysis on regional level

In frames of our research, we have analyzed the territorial differences and the sustainability aspects of the applied agricultural methods by dividing the 28 countries of the European Union into 242 statistical regions, then using a K-Means cluster analysis on the given sample.

Table 2: Overview of the results of a K-Means cluster analysis on NUTS-2 regions

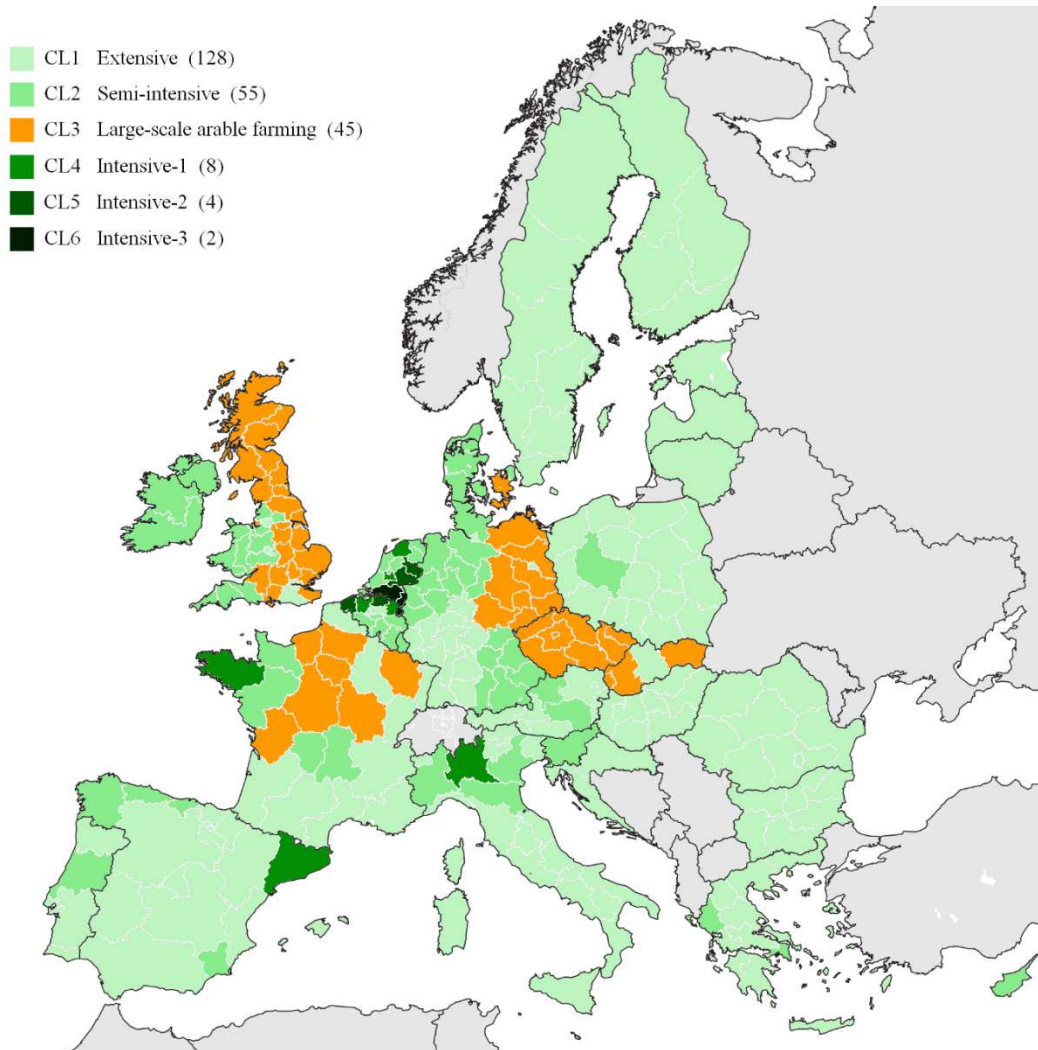
	CL1	CL2	CL3	CL4	CL5	CL6
	Extensive	Semi-intensive	Large-scale arable farming	Intensive-1	Intensive-2	Intensive-3
Number of regions	128	55	45	8	4	2
density (ppl./km ²)	105,3	177,0	179,8	355,7	418,6	497,2
<i>var01</i> LN(density)	4,657	5,176	5,192	5,874	6,037	6,209

var02	average farm size (ha)	24,4	41,3	128,6	26,1	23,1	21,0
var03	share of 100+ ha farms (%)	44,6	39,6	84,4	19,4	10,0	14,2
var04	utilised agricultural area (%)	37,1	47,9	56,6	42,1	50,1	46,5
var05	of which: arable land (%)	57,6	48,4	67,3	57,4	53,4	78,6
var06	livestock units per 100 ha	48	135	56	296	539	730
var07	soil erosion intensity (t/ha)	3,43	2,23	1,24	2,72	0,39	0,48
var08	value added / gross output (%)	45,6	37,3	36,6	43,3	46,7	27,9
var09	value added /external input	2,64	2,33	1,53	3,15	3,01	1,54

Source: author's calculations based on Eurostat(2017)

The **first group** of the 6 separate clusters we have created includes the regions which are **mainly extensive and low relative value (per hectare) producing territories** that can be also characterized with a low level of external input use. According to the data available, more than half of the EU28 regions were included in latter club. In the European context we can highlight that the regions have relatively low population density and there is also a duality concerning the structure of the agricultural estates: although the territorial share of large-scale farms (with over 100 hectares) approaches 50 percent, due to the small but numerous small family farms practising agricultural activities at a couple of hectares' area, the average estate size is around 24 hectares (Table n. 2). To continue, the ratio of arable land within cultivated territories is 57.6%. The rest of the territories are used as grasslands, pastures and to a lesser extent, as lands cultivated with fruits and vegetables. The fact that in current case, the average degree of soil erosion is the highest, is quite controversial with the low input use, the 50 percent value added productive capacity as well as the 2.64 Euro value added created per one Euro worth external input.

The **second group** of our classification contains 55 areas that use **semi-intensive agricultural practices**. The most typical characteristics of these regions are the following: relatively high population density, livestock as a counterweighing branch of agricultural activity and an estate size being twice as bigger as average (above 40 hectares). However, the value added productive capacity is definitely lower compared to the external inputs used and gross output.

Figure 2: NUTS-2 regions of the European Union grouped by clusters of sustainability

Source: own work based on data provided by Eurostat(2017)

The **third group** was created of 45 such regions where ***almost exclusively large-scale cropland management is practiced***. The average farm size here is above 120 hectares, the territorial share of farms over 100 hectares of cultivated land is 84.4 percent from the total utilised agricultural area, while animal density is relatively low and population density is similar to the second group's parameters.

With regard to the **fourth, fifth and sixth** group, we have to specify that it is composed of regions (there are altogether 8, 4 and 2 such areas) ***practicing intensive and particularly intensive agricultural methods***. Most of them are situated in Belgium and the Netherlands, nevertheless, territories within Southern Europe such as the Italian Lombardy and also the Spanish province of Catalonia have similar characteristics. High population density - that makes agricultural land as a resource considerably expensive and scarce within the region – is one of the main features of intensively cultivated areas. High land prices per hectare contribute to a process that agricultural undertakings aim at intensity increase instead of territorial expansion. There are only very few large farming estates. Per hectare livestock density is quite high in regions of intensive agricultural production. Compared to other areas, external input use is particularly high, especially in case of energy, fertilizer and pesticide inputs per hectare. Despite the strong concentration of production, the above-mentioned intensive areas cannot produce

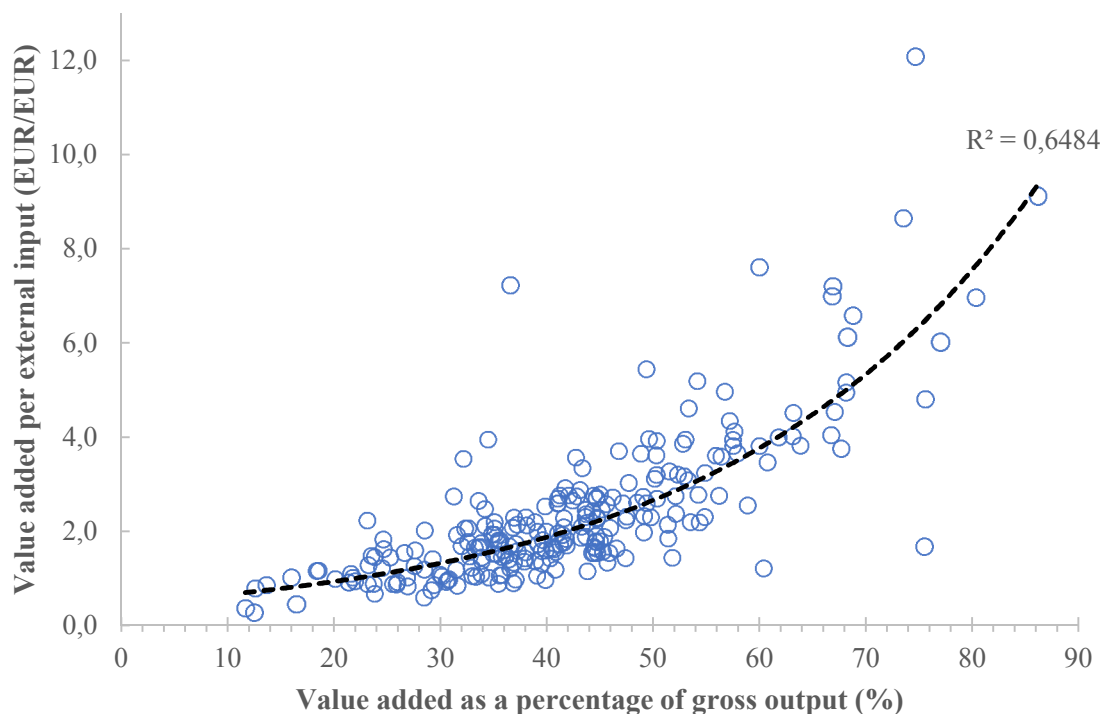
significantly higher value when using external inputs worth of one Euro. It can be therefore concluded that local circumstances play a much more important role throughout Europe than economic sense driven intentions - like for example higher effectiveness of resource use, higher value added production capacity - concerning the development of intensive ways of agricultural practice.

There is an observable, statistically significant exponential relation both on a regional and country-based levels between the value added productive capacity in the proportion of gross output of a given agriculture and the magnitude of value added created after having used a one Euro value external input. Value added turns out to be significantly low in percentage of gross output in areas from the third group which practice mainly large-scale cropland cultivation, while in South Europe – Italy, Spain, Greece and Slovenia – it is generally above 60%.

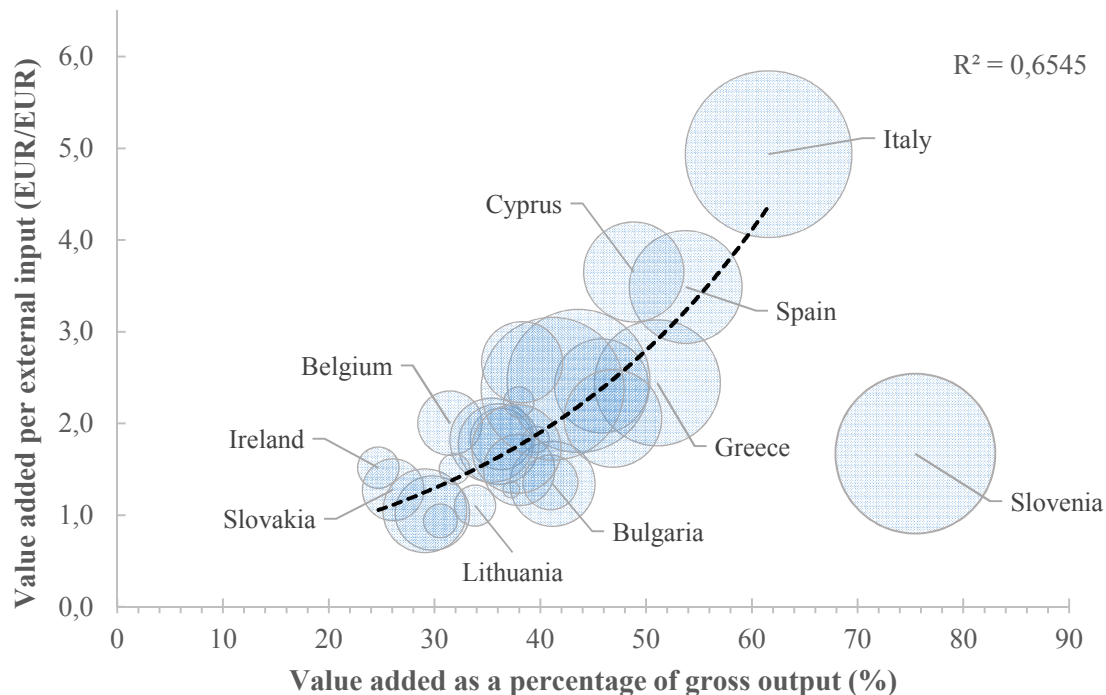
In case of higher value added agricultural practice the structure of costs greatly differs from the lower value added productive capacity based “dumping price seller” like large-scale arable farming. With higher value added production there is a decreasing ratio of costs connected to external inputs. For this reason, as it is viewed in Figure 3, the already mentioned exponential correlation may evolve. Most of South Europe’s regions can be classified to the first or second group of half-intensive clusters. At the same time, these regions are high value added producing areas, however, pressure deriving from soil erosion appears to be the highest here since the applied agricultural practices are not contributing appropriately to the preservation of agricultural land for future generations, although it is considered to be strongly value creative.

Figure 3: Relations between gross agricultural output, external inputs, and value added

a) by NUTS-2 regions



b) by EU-28 countries (*circle width: average intensity of soil erosion within a country*)



Source: own calculations based on data provided by Eurostat (2017)

4. Conclusions and discussion

It is well-known that for decades, the European Union (previously the European Economic Community) has been promoting the much wider and more comprehensive interpretation of socio-economic development. Technologies used for economic activities are becoming more and more complex, that is the reason why environmental and sustainability related risks are becoming cross-border, global challenges and are much complicated nowadays.

Agriculture as a sector, utilizes one of the most important natural resources, land which from the point of view of food security can be viewed as a sector of strategic importance in any country of the world. As we have already seen, land is a renewable resource, however, latter attribute can only be successfully used when the appropriate cultivating methods and farming practices are applied. The current productivity of agriculture, apart from land assets, proper know-how and selected cultivars, depends on several other external inputs – energy, fertilizers, pesticides, etc. – and most of them are produced from non-renewable resources, so their efficient utilization represents a key element concerning sustainability.

Europe's regions can be divided in several independent groups on the basis of some special features of agricultural production. More than half of EU's territories are being cultivated in frames of extensive farming which can be considered quite a successful method from the point of view of sustainability, due to a relatively low non-renewable input use, a value added productive capacity achieving 40-50 percent and also the 2.64 Euros value added created from a one Euro worth external input. Nevertheless, it is really controversial with the previous statement that the average rate of soil erosion is the highest here because certain South European regions with lower farming intensity are applying agricultural methods which cannot be considered ideal relating to the issue of topsoil protection.

The predominance of large-scale arable farming is typical in East German provinces, in the northern part of France, in the Czech Republic and Slovakia and also in the eastern parts of the United Kingdom. In these regions the relatively low per hectare value added producing capacity and the shifted balance between arable farming and livestock activities may lead to some serious problems, however, external input use per hectare remains relatively low.

One of the main facilities of areas applying intensive farming practices is high population density and therefore high land prices per hectare. Compared to other regions, external input use is particularly high, especially in case of energy, fertilizer and pesticide based value per hectare. Despite the strong concentration of production, these intensive territories are not able to produce higher value relying on the one Euro worth external input use than areas applying different extensive methods. We can assume that in case of intensive agricultural practice's development the special conditions emerging in local land markets of high population density are playing a much more important role in certain areas of Europe than for example, the economic considerations or the higher productivity based intentions of different market participants.

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Selected Factors Influencing an Implementation of Environmental Issues in the Slovak Companies

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Abstract

Corporate Social Responsibility as a form of corporate self-regulation integrated into a business model has three main pillars: Social, Environmental and Economic. Some authors divided this basic components into parts. Our research based on the four parts asses wchich examined issues in the term of: workplace, trade, environmental and local community. In this article we are focused on the environmental part of the research. In the methodology we are using descriptive statistics, non-parametric methods (The Kruskal-Wallis Test, Jonckheere – Terpstra Test) and Crombach Alpha. Conclusions of the mentioned analysis will be connected with the practical application of environmental issues in the examined research sample of Slovak Small and Medium Sized and Large enterprises.

Keywords: corporate social responsibility, environmental pillar, non-parametric test, Slovak Republic

JEL Classification: F64, Q59, L25

1. Introduction

Theoretical background of Corporate Social Responsibility is taking into account with sustainability is the term with significant importance in 21st century as well. The concept of sustainable development has gained recognition as a result of report known as Our Common Future, published by Brundtland Commission in 1987. Its idea has emerged even more after the debates about environmental protection, especially at the UN Earth Summit in Rio de Janeiro in 1992. Nowadays, CSR and sustainable development are concepts overlapping in many areas. Both of them involve integration of the economic, social and environmental dimension as explained Moravčíková (2016). Several new definitions of CSR were developed. Wood (1991) made an important contribution to the CSR literature when she revisited Carroll's CSP model and offered new point of view on it. Wood put main emphasis on outcomes or performance. Carroll also revisited his model of four-part definition and rebuilt it in pyramid construct (Jamali, 2007). The problem of environmental issues connected with the practical applying of social responsibility activities in Slovak companies. It means, that the CSR has become an important instrument to develop and implement more responsible business strategies that contributes not only to development of companies' themselves, but towards development of society and environment as well. (Bielik, Horská, Ubrežiová, A., 2012). There are many authors who deal with the CSR in the expert's or scientific articles. The understanding and implementation of CSR concept from the viewpoint of business strategy for small and medium-sized enterprises. Especially in Europe, where 99 % of business companies are SMEs, focus is devoted into more structured implementation of CSR concept into SMEs business strategies Ubrežiová, A., Horská (2011) and Mura, Buleca (2013) . Practise shows that the most effective form of protecting a good reputation and managing the risk associated with its damage, is to actively take into the account the interests of the parties that the business of enterprises affects- it means being a corporate social organization where understanding and implementing the CSR concept is a critical part of the corporate strategy of the average and small business. Bylok

(2016) wrote, that in the context of the strategy of corporate social responsibility in SMEs it is worth analysing the relations with external stakeholders. Responsible behaviour with regard to clients is a very important business area of CSR that is directly reflected in the conditions of the firm and its development. Formánková, Kučerová and Prisažná (2016) confirmed that development of social responsibility currently touches both business and public sectors, not only in the area of state administration but also in the field of tertiary education.

2. Data and Methods

Article builds on the results of mentioned research and deals with application of selected environmental issues in Slovak companies in more detail. Considering that the effect of effect of legal form and number of employees on application of environmental policy in selected set of companies is already solved, in this research we continue with the evaluation of statistically significant effect of another three factors (length of business experience, geographical location and majority ownership). These factors was selected according to sorter features commonly used in this type of research. The data were collected truth questionnaire survey conducted via online Google Docs questionnaire. Respondents evaluated application of environmental issues in thirteen scaling contained questions (Q1-Q13):

- Q1 - To what extent the company deals with the environmentally friendly practices?
- Q2 - To what extent the company deals with the minimizing of environmental impacts?
- Q3 - To what extent the company deals with reducing material and energy-intensive processes?
- Q4 - To what extent the company deals with waste minimization?
- Q5 - To what extent the company deals with protection of the natural environment?
- Q6 - How is the company engaged in recycling?
- Q7 - To what extent the company deals with an optimization of transport?
- Q8 - To what extent the company deals with research and development in the field of environmental protection?
- Q9 - To what extent the company purchase environmentally friendly equipment and machinery?
- Q10 - To what extent the company deals with energy saving?
- Q11 - To what extent the company deals with water saving?
- Q12 - To what extent the company is involved in the promotion of mutual cooperation with other companies in the environmental field?
- Q13 - To what extent the enterprise is involved in the raising awareness on environmental policy and responsibility?

The total number of analysed subjects was 58. These are established in different districts of the Slovak Republic, had a different organizational-legal forms and number of employees. The largest number of respondents who participated in the survey were the limited liability companies (they accounted for over 67% of respondents).

Respondents had the choice of five - point scale (from no deal with the problem to very deals with it). In case the respondent has not been able to answer some of the questions, the issue was left out. After data collection and adjustment we evaluated the reliability of chosen range truth measuring of the internal consistency of the scale so-called Cronbach alpha coefficient (). This

indicator based on assessment scales examining correlations between individual items in relation to the variability of items. Value $\geq 0,7$ means sufficient internal consistency of the scale. The null hypothesis of the Kruskal-Wallis test assumes that the samples are from identical populations. Alternative hypothesis assumes that the samples come from different populations. When the p-value is such that the null hypothesis has to be rejected, then at least one sample (or group) is different from the others. For pairwise comparisons between groups we used the Steel-Dwass-Critchlow-Fligner procedure and Jonckheere-Terpstra tests for the hypothesis that the within-sample magnitude of the studied variable increases as we move from samples low on the criterion to samples high on the criterion. The p-value has been computed using 10000 Monte Carlo simulations.

In this article we deal with three assumptions:

ASSUMPTION 1: Length of business experience (the year of foundation) of the company does not affect an application of environmental policy.

ASSUMPTION 2: Geographical location of the company does not affect an application of environmental policy.

ASSUMPTION 3: Companies according to their majority ownership does not affect an application of environmental policy.

3. Results and Discussion

Applicable regulations regarding environmental protection standards may encompass both the protection of indigenous natural resources as well as bans on the import of goods that may be harmful to the environment (Lucas, 1998). The traditional approach is that environmental standards limit the competitiveness of companies, which are forced to adopt these standards and as a result limit their export potential (Ekins et al., 1994). The more contemporary opinion is that the implementation of appropriate environmental standards has long-term benefits which should improve the competitive position of complying companies in the long run (Alpay, 1999). In countries with high environmental protection standards, losses resulting from environmental destruction have been assessed at 1-2% of GNP, while in countries with much lower standards of protection, these losses have been known to reach 3-5% of GNP (Repetto, 1993)

3.1 An impact of the length of business experience on the application of environmental policy in the company

At the beginning we examined an impact of the length of business experience on the application of environmental policy in the company. (Table 1).

Table 1: Analysis of differences in application of the environmental policy in different categories of enterprises according to the year of their foundation (starting business)

Question	Chi-Square	Asymp. Sig.	Sig.	Monte Carlo Sig. 99% Confidence Interval	
				Lower Bound	Upper Bound
O1	2,338	0,674	0,693c	0,681	0,705
O2	3,558	0,469	0,501c	0,488	0,514
O3	3,792	0,435	0,457c	0,444	0,470
O4	5,810	0,214	0,216c	0,206	0,227
O5	6,430	0,169	0,162c	0,153	0,172
O6	6,834	0,145	0,133c	0,124	0,141
O7	0,820	0,936	0,946c	0,940	0,952
O8	1,677	0,795	0,822c	0,812	0,832

O9	3,373	0,497	0,531c	0,518	0,543
O10	3,507	0,477	0,504c	0,491	0,517
O11	2,023	0,732	0,759c	0,748	0,770
O12	5,205	0,267	0,268c	0,257	0,280
O13	6,326	0,176	0,173c	0,163	0,182

Source: author's calculation

Note: ° Based on 10000 sampled tables with starting seed 1993714141

In case of this assumption we can conclude, that we can not decline the null hypothesis of the Kruskal-Wallis test on the 5% level of significance. This statement is valid for every question connected with the application of environmental policy in the company (table 1). According mentioned we do not reject the assumption 1. Moreover we can conclude, that the length of business experience (the year of company foundation) has no impact on the application of the environmental policy in selected companies. Currently, companies are required to contribute the solution for problems of environmental protection. A business which has an activity focused in this area is using the environmentally oriented marketing. For the main purpose of environmental marketing, we can consider the restriction of environmental load in the market activities of the enterprise through the satisfaction of the customers and use of competitive advantages of an enterprise to achieve its goals. (Kramer, M. et al., 2005)

3.2 An impact of the geographical location on the application of environmental issues in different companies

Secondary, an impact of the geographical location on the application of the environmental issues in different companies according to their home office was examined. In this part of research the geographical location in selected NUTS II Slovak regions was important.

Table 2: The analysis of differences in the application of environmental issues in different companies according to their home office

Question	Chi-Square	Asymp. Sig.	Sig.	Monte Carlo Sig.	
				99% Confidence Interval	
				Lower Bound	Upper Bound
O1	4,833	0,089	0,090c	0,083	0,097
O2	6,584	0,037	0,034c	0,029	0,039
O3	2,485	0,289	0,299c	0,287	0,310
O4	0,106	0,948	0,953c	0,947	0,958
O5	4,141	0,126	0,124c	0,115	0,132
O6	6,102	0,047	0,042c	0,037	0,048
O7	9,737	0,008	0,005c	0,003	0,007
O8	2,509	0,285	0,304c	0,292	0,315
O9	3,568	0,168	0,174c	0,164	0,184
O10	1,025	0,599	0,627c	0,614	0,639
O11	0,932	0,627	0,646c	0,633	0,658
O12	4,408	0,110	0,109c	0,101	0,117
O13	1,031	0,597	0,605c	0,592	0,617

Source: author's calculations

Note: c Based on 10000 sampled tables with starting seed 2129180967

The table 3 shows, that we can not decline (on the 5% level of significance) the null hypothesis of the Kruskal-Wallis test in the case of ten questions from the area of application of the environmental policy. On the other hand, the null hypothesis we can decline in case of questions 2, 6 and 7 (table 2). The Results of the multiple pairwise comparison in case of questions 2, 6 and 7 shows table 3.

The statistically significant difference in the application of environmental issues in the company we found in the case of question:

- Q 2 - There is a statistically significant difference in the system of minimizing environmental impact between small and medium size enterprises.
- Q6 - There is a statistically significant difference in engaging in recycling between small and medium size enterprises.
- Q7 - There is a statistically significant difference dealing with an optimization of transport between small and medium size enterprises.

Table 3: The results of multiple pairwise comparison of subgroups by using Steel - Dwass - Critchlow - Fligner for question no. 2, 6, 7 - the classification of companies according to their home office

	Significant differences			p-value		
	Q 2 1	Q 2 2	Q 2 3	Q 2 1	Q 2 2	Q 2 3
Question 2 1		Yes	No	1	0,034	0,990
Question 2 2	Yes		No	0,034	1	0,086
Question 2 3	No	No		0,990	0,086	1
	Q 6 1	Q 6 2	Q 6 3	Q 6 1	Q 6 2	Q 6 3
Question 6 1		Yes	No	1	0,044	0,995
Question 6 2	Yes		No	0,044	1	0,097
Question 6 3	No	No		0,995	0,097	1
	Q 7 1	Q 7 2	Q 7 3	Q 7 1	Q 7 2	Q 7 3
Question 7 1		Yes	No	1	0,006	0,764
Question 7 2	Yes		No	0,006	1	0,124
Question 7 3	No	No		0,764	0,124	1

Source: author's calculations

According realized research we can conclude, that we do not reject the assumption 2 and consequently the geographical location of the examined companies has no statistically significant impact on their application of environmental policy.

3.2 An impact of the majority ownership on the application of environmental policy in the company

Finally an impact of the majority ownership on the application of environmental policy in the company was examined. This part of research is connected with common understanding, that companies with foreign ownership focus more on social responsible principles when compared with companies with domestic owners.

Table 4: The analysis of differences in the application of environmental issues in different companies according to their majority ownership

Question	Chi-Square	Asymp. Sig.	Sig.	Monte Carlo Sig.	
				99% Confidence Interval	
				Lower Bound	Upper Bound
O1	1,639	0,441	0,460c	0,447	0,472
O2	1,971	0,373	0,388c	0,375	0,400
O3	6,585	0,037	0,033c	0,029	0,038
O4	3,467	0,177	0,183c	0,173	0,193
O5	9,677	0,008	0,005c	0,003	0,007
O6	5,173	0,075	0,070c	0,063	0,076
O7	3,042	0,219	0,220c	0,210	0,231
O8	9,457	0,009	0,007c	0,005	0,009
O9	5,810	0,055	0,052c	0,046	0,058
O10	0,519	0,771	0,787c	0,776	0,797
O11	1,936	0,380	0,392c	0,379	0,404
O12	7,524	0,023	0,020c	0,016	0,023
O13	9,408	0,009	0,005c	0,003	0,007

Source: author's calculations

Note: ° Based on 10000 sampled tables with starting seed 134453947

The null hypothesis of the Kruskal- Wallis test can be decline on 5% level of significance in the case of eight questions (table 4). But, in case of questions 3, 5, 8, 12 a 13 we can decline the null hypothesis and we accept an alternative hypothesis. The Results of the multiple pairwise comparison in case of questions 3, 5, 8, 12 a 13 shows table 4.

According realized calculations we can conclude that there is a statistically significant difference between small and medium sized enterprises in case of their dealing with reducing material and energy-intensive processes, protection of the natural environment, research and development in the field of environmental protection, involving in the promotion of mutual cooperation with other companies in the environmental field and raising awareness on environmental policy and responsibility. After looking up for the researches dealing with CSR within Slovak Republic, papers by Prokeinová (2012) and Prokeinová and Paluchová (2012) are the only ones that are directly connected with author's research. Their focus was on companies operating within food industry in Slovak Republic and 30 companies from whole Slovak Republic were involved.

According to results of the survey in environmental pillar, 83% of respondents have efforts to reduce the impact on the environment and the rest is trying to reduce it at least partially. There was no company with negative approach to this issue. The most common activities of environment pillar were recycling of waste (23.75%), waste minimization (22.5%), energy savings (20%), prevention against pollution (16.25%) and protection of the natural environment (13.75%).

Table 5: The results of multiple pairwise comparison of subgroups by using Steel - Dwass - Critchlow - Fligner for question no. 3, 5, 8, 12, 13 - the classification of companies according to their majority ownership

	Significant differences			p-value		
	Q 3 1	Q 3 2	Q 3 3	Q 3 1	Q 3 2	Q 3 3
Question 3 1		Yes	No	1	0,027	0,947
Question 3 2	Yes		No	0,027	1	0,653
Question 3 3	No	No		0,947	0,653	1
	Q 5 1	Q 5 2	Q 5 3	Q 5 1	Q 5 2	Q 5 3
Question 5 1		Yes	No	1	0,007	0,469
Question 5 2	Yes		No	0,007	1	0,565
Question 5 3	No	No		0,469	0,565	1
	Q 8 1	Q 8 2	Q 8 3	Q 8 1	Q 8 2	Q 8 3
Question 8 1		Yes	No	1	0,008	0,744
Question 8 2	Yes		No	0,008	1	0,402
Question 8 3	No	No		0,744	0,402	1
	Q 12 1	Q 12 2	Q 12 3	Q 12 1	Q 12 2	Q 12 3
Question 12 1		Yes	No	1	0,019	0,480
Question 12 2	Yes		No	0,019	1	0,783
Question 12 3	No	No		0,480	0,783	1
	Q 13 1	Q 13 2	Q 13 3	Q 13 1	Q 13 2	Q 13 3
Question 13 1		Yes	No	1	0,008	0,253
Question 13 2	Yes		No	0,008	1	0,800
Question 13 3	No	No		0,253	0,800	1

Source: author's calculations

According mentioned findings we can conclude, that we do not reject the assumption 5 and consequently the majority ownership has no statistically significant impact on the application of environmental policy in examined companies. In comparison with the theoretical issues, Jones (1995) argues that although Freeman's recognized importance of stakeholders, the status of stakeholder approach as a theory is still unclear.

Nowadays, companies, especially large ones, may look for formal approach to CSR and internationally recognized guidelines and principles. Therefore, this part of the chapter describes definitions of CSR by worldwide known, important and international organizations. Many of them have efforts to emphasize the importance of implementing CSR into business and are main drivers for the concept. As it is mentioned above, the role of business in society is influenced by increased awareness of environmental and social issues. Therefore, governments also institutions at supranational level set certain standards and practice law with regard to those issues (Asongu, 2007).

4. Conclusion

The submitted article deals with Corporate Social Responsibility (CSR) within the selected companies operating in Slovak Republic. The aim was to evaluate the application of selected environmental issues in Slovak companies in more detail and to contribute to knowledge and to gain understanding about the current state of CSR with regard to the environmental pillar. The questionnaire survey was undertaken by 58 companies from all regions in Slovak Republic. In relation to the aim of article, we can state that International Organization for Standardization (ISO) is according to Danelli, S. (2012) defined as the world's largest developer of international voluntary standards. ISO was created with the purpose to facilitate the international coordination and unification of industrial standards. It includes following standards: ISO 9000 Quality Management Standard is based on the creation of a series of principles for the management of the quality inside the company, ISO 14000 Environmental Management Standard identifies legislation with respect to environmental protection and is concerned with various aspects related to the environment, such as soil pollution, air pollution, water pollution, noise pollution, electromagnetic pollution and ISO 26000 Social Responsibility Standard encourages companies to undertake the responsible behaviour in its entirety and to work carefully towards the community and the environment. We were interested how the employees perceive business activities that the company performs in environmental field and their knowledge of the given activity. After results analyze, we evaluated the environmental pillar of CSR of the set of 58 companies. The employees are well informed about the waste separation in companies and participate in it. They perceive the use of resources as responsible and efficient, but company can decrease the wastage even more and increase its awareness.

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***SESSION 4 Knowledge an Innovation Management
New Trends in Management and Marketing***

The Integration Problems of Development of System of Management of Industrial Enterprise

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Abstract

In article are considered the theoretical-methodological aspects of identification and systematization of integration problems of development of system of management of industrial enterprise. Considering of a lot of aspects, a multilevelness, big dimension, complexity and uniqueness of problems of creation of the integrated systems management by authors it is offered to use synergy approach with use of the configurator giving the chance to determine group of parameters of integrity of system, including: level of organizational perfection; subjectivity; personnel involvement; an iterativity as availability and development of regular procedures of self-diagnostics and the made decisions by its results.

As a basis for development of competences of management it is offered to use the systematized business model. Effectiveness of application of the approaches offered by authors contacts presence of the active subject of the management having skills of self-diagnostics and pertinent risk – appetite for accepting liability for implementation of difficult projects of development of the entity and transition of system of management to higher levels of an organizational capability – to a self-development.

Keywords: industrial enterprise; the integrated system of management; integration problem of development of system of management of the entity; synergy modeling; configuration of synergy modeling; organizational perception of the integrated system of management

JEL Classification: M19, O10

1. Introduction, Own work, Results

A significant amount of researches is devoted to integration problems of development of management systems of the entities, at the same time the vast majority of these works consider a problem of creation integrated system of management, mainly, in the context of certified tasks. For this purpose act as the bases: increase in a possibility of certification on compliance to international standards; ensuring bigger coordination of actions of subsystems of management in the organization; decrease in functional isolation and dissociation; more productive risk response; streamlining of a regulation; creation of the best conditions for achievement of balance of interests of stakeholders, involvement of personnel and investment with its powers that as a result develops into achievement of bigger effectiveness [1-6].

Among approaches to creation of the integrated systems of management approach on the basis of the modern concept the business-model (BM) is offered [7,10]. Really, if for understanding of essence of the integrated system of management to put idea of BM, then there is an opportunity to consider basic characteristics of BM as priority decision makings of a vector on integration. In case of all prospects of studying integration a problem of management systems on a methodological basis of BM, it should be noted also the problems caused by a lot of aspects, a multilevelness, big dimension and it is final uniqueness of BM [9]. It should be noted also that one entity can have several BM. All this doesn't reduce complexity of a problem, and increases it rather.

In our opinion, it is reasonable to consider systematization of integration problems in development of enterprise management systems from line items of synergy approach, focusing attention on problems of self-development and a role of the active subject of management in management of transition of system to higher levels in competitive aspect. It is necessary to consider that, within works on system thinking for a long time "integration" is considered in comparison to "differentiation", and management of transition is a complex work within a set of antitheses of management. "Organization development represents purposeful transition to higher level of integration and differentiation at the same time. For each level of differentiation there shall be a minimum level of integration below which the system will just break up to parts and will turn into chaos. And, on the contrary, big extent of differentiation that the system didn't turn into the fruitless desert" [8] is necessary for higher levels of integration.

For a specification of features of application of synergy approach we will enter several starting conditions. First of all, for reflection of the highest level of a capability to development of the entity we will designate its capability to self-development, to initiation and maintenance of a context, the ordered structures and mechanisms, harmonious to interaction of a set of the subsystems providing "purposeful transition to higher level of integration and differentiation at the same time" on the basis of the active initiating role of the subject of management, an involvement of personnel and a capability to hold and develop integrity of the organization.

As basic determination of a business model we will use determination: "The business model is complete shape of how perception us by our clients is transformed to an aggregate financial result" [10]. The idea of integrity management and allocation of group of specific backbone factors which create is the cornerstone of this determination and keep integrity. Integration acts as one of such parameters along with flexibility (a capability to quick response), innovation and a capability to cooperate.

In our opinion, it is reasonable, also to correlate a problem of creation of ISM to key questions of G. Hemel of that "How to reconstruct all management system that it didn't lag behind promptly changing life? What to undertake first of all?" [11,12]. In this situation the question of acceptance of adequate management decision depends on what methods managers for understanding of a situation use, adequacy of these methods, and, the main thing, these methods become a guarantee of relevance of the made decisions. The problem of the understanding perception becomes key [13]. Therefore it is necessary to allocate with the following vector of an assessment of integration of system of management the approaches and methods used by management for establishment of a situation. Here important is not BM, but approaches, processes and the organization of diagnostics, identification of parameters of an order which remove plurality of information on system. The wide range of the applied approaches is known: use mainly classical approaches; application of the systematized models of the organization, for example, EFQM [14,17] and estimative RADAR [15,18], creation systems of the integrated estimative systems for a strategic assessment of the organization [15], development of approaches to the express train – an assessment [19]. At the same time, events develop so promptly that traditional methods of the analysis can be not only aren't adequate, but just not to be in time behind rates of changes and to yield absolutely unacceptable results for decision making. Modern approaches are based on a line item that "it is impossible to predict future, it is only possible to prepare for it" [20]. It is possible to prepare developing unique organizational capabilities, for example, "creating system of the early notification which would be capable to reveal those changes to which you need to react quickly" [20].

It should be noted one more basic aspect showing a challenge to the understanding perception. It is the fact that the problems requiring for the permission absolutely not of traditional methods

of the analysis adjoin to regular problems, are with them in "one portfolio", it is also necessary to identify and make them on them the decision.

Summarizing the problem of understanding perceptions, the relevance of owning an organizational resource that provides an adequate view of decision-makers on the assessment of the situation and the ability to initiate actions based on the best model representations, it seems that the key question is how to look at all this. That is, we need to specify the impulse (vector) in which our logic of understanding perception, the "early warning system" was not in a feverish search for what we are dealing with and where to start, but was able to carry out conscious actions, realize "searchlight", and Not a "bucket" [21] type of behavior. It seems that using the methodology of synergetic modeling [22], we can more reliably cope with the emerging complexity.

As parameters for the development of these mechanisms, it is proposed to consider: the level of organizational excellence, as the ability to apply appropriate approaches and methods for harmonizing integration and differentiation; Subjectivity, as the ability to initiate changes to a transition to a higher level of organizational maturity, involve staff in the processes of change, assume risks and responsibility for change; Involvement of staff and evaluation of his perception of approaches to the development of the organization; Iterativity as the availability and development of regular self-diagnosis procedures and the decisions made based on its results. At the same time, as parameters for assessing the involvement of staff, indicators of the perception of the quality of their employment in terms of the attitude towards involvement can be used by the staff. So EPSI, one of the companies that assess the perception of personnel, grades management maturity levels based on the estimated satisfaction indexes (ESI) [23]: to 0.60 is a very weak result; Range 0.60-0.65 weak result; 0,65-0,75 average result; 0,75-0,80 good result; More than 0.8 very good result. The configuration for assessing the level of development of the enterprise management system, its integrity, in terms of integration and differentiation is presented in Table 1.

The analysis allows to systematize the integration problems of the enterprise management system development:

- as a starting problem it is necessary to single out the problem of management of the enterprise as a self-developing system that corresponds to modern approaches to the description of such systems as complex, open, no equilibrium. Integration of the perception of such systems is manifested in the need to find a harmonious balance in the system of I-D, ensuring the integrity of the system and the required characteristics of competitiveness in terms of flexibility, innovation, networking and technological excellence;
- it is advisable to assess the maturity of the enterprise management system from the point of view of its ability to identify and apply priority integration factors, from the elimination of risks of non-harmonization of existing management systems to enterprises, before decisions on the strategy for achieving a harmonious balance of I-D on the basis of increased subjectivity of management, And development of initiation processes. The position of the enterprise with regard to the integration strategy requires the enterprises to master modern diagnostics mechanisms, "understanding perceptions", which can increase the guarantees of identifying priority integration factors and create conditions for choosing well-founded priorities, development goals and strategies;
- the problem of goal-setting implies, first of all, the ability to understand the level of uncertainty, including objective, artificial and subjective uncertainty. In the first case, we are talking about objective uncertainty caused by the environment. In the second

case we are talking about artificial uncertainty (complexity) caused by the strategic idea that we are nurturing. We are dealing with the complexity of a conceived project, strategy. In the third case, we talk about our readiness, to carry out our plans in real conditions, about our confidence or insecurity to act. Such an assessment can be made using a modern concept of risk-appetite. At the same time, the modern concept of risk appetite should be perceived not only as the ability to take on and optimize a certain level of risk, but also as a characteristic of the subjectivity of management to initiate activities and carry out the conceived;

Table 1: The Configuration of the levels of development of the company's management system

Level	Name	Characteristics and organizational perception of integration and differentiation (I-D)
5	The optimization	The task of implementing the strategy is formulated as the activation of self-development and the achievement of a harmonious balance of I-D on the basis of strengthening the subjectivity of management, involving staff and the development of initiation processes. Priority problem - transition management. Required level $E > 750$. Staff involvement > 0.8 .
4	The manageability	The task of implementing the strategy is formulated as actions that provide increased guarantees of achievement of the objectives, increase of sustainability and adaptation, management of the risks of maintaining the required I-D balance. The priority problem is maintaining integrity. Level E in the range of 550-750. Involvement - 0,75-0,8.
3	The regulation	The strategic task of forming an I-D balance is formulated as the direction of creating an integrated management system focused on removing the problems of misalignment of the implemented management subsystems and individual standards. Priority problem - the creation of management systems that meet the requirements of standards. Level E in the range of 350-550. Involvement - 0,65-0,75.
2	The prospective	Strategic Objective on the I-D balance is formulated as a direction for improving the functioning of individual systems and procedures. The priority problem is cost reduction, rationing and limitation of individual functions and procedures. Level E in the range of 150-350. Involvement - 0,6-0,65.
1	The initial	Strategic task with respect to the I-D balance is not formulated and is not fully realized. Priority problem - survival and development priorities. Level E in the range of up to 150. Involvement - up to 0.6.

- goal-setting and actions to achieve the goals are related to resolving the problem of understanding the transition model and the transition control model. So, for example, for high risk appetite, three relevant alternatives can be identified, where high uncertainty and complexity and when one of the parameters (uncertainty or complexity) is not high. This makes it possible to form a model for choosing a solution under conditions of uncertainty. On the other hand, we need to understand the transition model associated with passing the stages of dynamic equilibrium (stability, accumulation of changes) and instability (bifurcation, the formation of new structures) and the willingness to assume risks and responsibility for these solutions. Decision-making on leadership and a transition management model is required, which constitutes the key

problem in the context of the transition from a new balance of integration and differentiation;

- the development of the organizational competencies of an enterprise to identify priority integration factors and to manage them can be facilitated by the selection as a tool for a comprehensive self-diagnosis of the EFQM excellence model. The model creates a holistic view of the organization and can be used to understand how different management methods and tools are interrelated. The development of appropriate solutions for transition management will be facilitated by the use of synergistic modeling approaches and the application of the configurator proposed in the article, which allows an objective assessment of the maturity of the management system and selects priority actions for the transition to a higher level of development.

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Innovative Research Tools for Retail and Services

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Abstract

Traditional research tools, including questionnaire surveys, provide increasingly irrelevant information. There are several reasons for this, mainly hasty times we live in, as people in these surveys either do not have time to properly think about what the person conducting the survey asks them, they do not understand the question or simply do not want to answer truthfully, especially when it comes to sensitive issues or they respond the way the society expects them. On the other hand, many questions cannot even be answered truthfully, because the human brain receives a huge amount of information every millisecond, which is then being filtered, and as a result, the person fails to fully recognize and realistically assess all the aspects of decision-making. Until recently marketers and traders could not see into the heads of consumers' and learn about their needs, but the current advanced technology allows them to explore the human brain through neuroscience and biometric methods. The paper points to the new possibilities of market research and underlines the growing need for their implementation in the form of innovative research solutions that can be used in different economic sectors (retail and services). These devices allow exploring the contentment (emotions, visual attention), but also the environmental factors acting not only with the awareness of the respondent (research vest), but even without his full knowledge (smart kiosks). The interpretation of the obtained data provides businesses with new opportunities in making economic decisions in particular markets.

Keywords: consumer neuroscience, innovative research solutions, market research

JEL Classification: M31, M81

1. Introduction

Aggressive competitive market action, then demands and changing customer priorities have resulted in the need for more comprehensive and more detailed information about the target and potential market segments. The main way, how to obtain this information is through marketing research too (Horská et al., 2015). The research in marketing environment is substantially wider than conventional survey of final consumers and their decision-making (Lee et al., 2007). Authors, Wiid and Diggins (2009) define the marketing research as a scientific process of collecting and processing information in order to help to marketing managers in the decision-making process. Marketing research is used when specific information is needed. Paluchová (2014) presents it as the combination of consumers, customers and the public with marketing professionals through information used to identify and determine the marketing opportunities and problem, generates, evidences and evaluates marketing actions, improves understanding of marketing and helps to effectively and specific marketing campaigns. The object of marketing research can be the various tools of the 4 P marketing mix that we have mentioned above as well as the research of customer preferences and satisfaction and image of research. It is important to recall that information resources for marketing research can be obtained through primary or secondary research (Kleinová, 2013). Secondary research is usually done first and consists of obtaining and processing existing information that is already available, it is a more efficient method that is less expensive and it saves time. If secondary research does not provide

us with the necessary information, a primary research variant is selected to obtain information directly at the place of occurrence, then in the field, using by different methods (Beri, 2013). Considering the purpose and nature of the information required to form the foundations of marketing decisions, it may be distinguished several research methods (Šugrová et al., 2016). One of the most commonly used methods in a practice is asking, either by means of a questionnaire, written, personal or telephone addressing, or asking by information technology. Another method is also the observation, which is sensible - a visual form of information gathering. Monitoring the effect of one independent variable on the second dependent variable is another experimental method and the experiment. A separate category is represented by other methods of research, including an omnibus, group discussion and panel (Nagyová et al., 2014). These classic methods are long-time used and effective, but nevertheless there is still a confrontation between obtained information about consumer attitudes towards a product/service and between current consumer behaviour at the point of purchase. People tend to say one thing, while their behaviour suggests something completely different (Lindstrom, 2009). It is known that over 90 % of the information is processed in the subconscious of the human brain. This is exactly what it is a subconscious process of information that plays an important role in decision-making of consumer behaviour. Since traditional research methods still do not penetrate into depth of subconscious process for to understand consumer behaviour, the results of research and genuine consumer behaviour were inconsistent. By finding this information, there was a reason why marketers as well as researchers should re-evaluate the research used methods (Agarwal, 2015). As in other areas as well as in the field of marketing, knowledge from several disciplines such as economics, psychology, biology and medicine (Javor, 2013) has been linked. The connection of these environments can be explored deeper than the brain physiologically influenced by various marketing stimulus. Over the past decade, consumer neuroscience has made significant advances in generating knowledge about product marketing and consumer behaviour, precisely those areas where conventional research methods have failed to adequately cover (Horská et al., 2015).

2. Data and methods

This paper is based on the study of existing knowledge in the following areas:

- traditional vs. innovative research tools;
- market research using biometric and neuroimaging methods;
- distribution and placing of various research methods and developing of patent technology;
- the need for the implementation of consumer neuroscience in market research and decisions making.

The result of the study finalizes the definition of main reasons for the need to implement innovative market research methods to increase the denunciation of these studies, to evaluate their use in marketing management and to obtain feedback from real conditions. The need of innovative research methods' implementation is also documented by an increasing percentage of biometric and neuro-imaging methods in research conducted, mainly abroad. In order to obtain information about new technologies, we've compared the possibilities of three research tasks in laboratory and seven in real-world conditions. Besides the comparison of laboratory and real conditions, the contribution is also presented by the most frequently used combinations of feedback gathering with participation's attendance and without participation's attendance of the respondent through the biometric method, means facial analysis (FA) and measuring of reaction time. In the conclusion of this paper is emphasized several examples obtained from primary data of neuromarketing research, possible used in academic and commercial practice.

3. Results and Discussion

Methods of qualitative and quantitative research by right and clear interpretations offer to researcher's very valuable access to almost all areas, which are researched on the market. Most research agencies in Slovak Republic are trying to provide to clients with comprehensive results through traditional research tools (see Table 1), which can be implemented in both laboratory and real conditions too.

Table 1: The Most Offered Tradition Research Forms (in Real and in Laboratory Conditions) of Agencies at Slovak Market

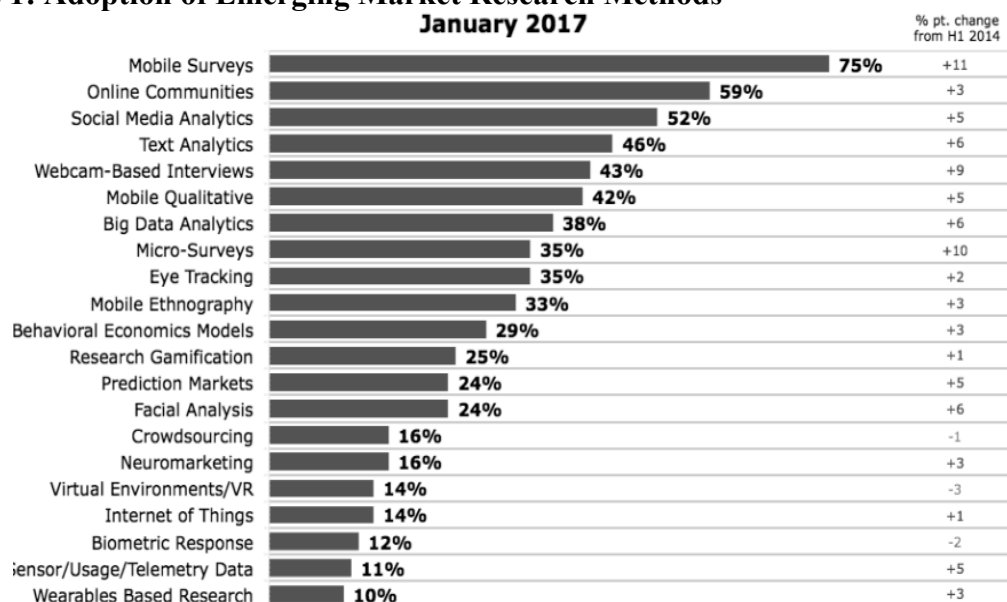
Research Task	Output
1. Questionnaire survey	Clearly arranged graphical and statistical processing of the primary data, depending on the researched issue.
2. Individual/ focus group interview	Summarizing report of opinions, creative ideas, conflicts and knowledge*.
3. Panel	Evaluation of various products/ services attributes among scientific participation 'attendance.
4. Mystery shopping/ observation	Final report reflecting the picture of the activities taking place in real conditions.

Source: Own processing

Note: * During focus groups it is possible to make a detection of participants' emotions by using of biometric methods.

On a global scale, it can generally be said that the use of biometric and neuroimaging methods is constantly increasing in the use of research tools (Figure 1), although these methods are presented separately, not as part of the neuromarketing or, respectively, consumer neuroscience. The reason is a fact that in many mainly developed countries these methods have been taught so much that they are considered as a common standard.

Figure 1: Adoption of Emerging Market Research Methods



Source: GreenBook Industry Trends (GRIT) Report 2017

The most frequently used innovative forms of research in laboratory conditions belong to the methods that denote the emotional and visual attention of respondents (Table 2). These forms

of research allow the discovery of more detailed aspects that cannot be investigated under real conditions.

Table 2: Innovative Research Forms in Laboratory Conditions

Research Task	Output
1. Emotional attention/ focus of respondents in testing of various stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aromatic compounds, etc.).	<ul style="list-style-type: none"> ▶ Measured information about emotional attention/ interest of respondents during monitoring/ submission of stimuli. ▶ The level of attention can be detected by multiple methods or a combination of them.
2. Respondents' emotions in testing of different stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aroma compounds, etc.).	<ul style="list-style-type: none"> ▶ Detailed information about respondents' emotions (valance of excitement) and about their developing changing during monitoring/ submission of stimuli. ▶ In case of more methods using (biometric and neuroimaging), it could interpret the consumer' emotions through emotional score.
3. Respondent' visual attention during research of various stimuli (e.g. logo, packaging, brand, advertising, price, discount, website, mobile application, merchandising, aromatic compounds, etc.).	<ul style="list-style-type: none"> ▶ Final graphic maps of respondents' visual attention during tested stimulus. ▶ Visual attention is processed in the form of summary heat maps, fixation points and clusters.

Source: Authors' own processing

For contractors, findings gained in field conditions are the most important because they reflect the researched reality most accurately. In this regard, different technologies are being developed around the world to facilitate, refine and provide a comprehensive basis for decision-making, including two technologies, which are subject of a European patent, created at the Slovak University of Agriculture in Nitra.

The first technology "**Means of obtaining and / or processing neuromarketing data, a system for its implementation**" allows getting feedback on feelings, visual attention and movement in any defined space. This solution enables solving multiple research tasks, as seen in Table 2, without significant limitation of the respondent.

Table 2: Qualitative and quantitative research through biometric and neuroimaging mobile devices using patented technology

Research Task	Output
1. Movement of target groups within the defined area of the store / shop / branch / showroom.	<ul style="list-style-type: none"> ▶ Graphically processed maps of the movement of customer segments (color-differentiated) within the layout (of the store, shop, branch, showroom). ▶ For each target segment, it is also possible to generate aggregate heat maps ("hot line") within the layout of the store / shop / branch / showroom. ▶ It is possible to create a comprehensive heat map of movements (including all target groups of customers), for clear identification of preferred locations and "grey zones" within the defined space.
2. Direction of orientation / access to individual attributes in the store / shop / branch / showroom.	<ul style="list-style-type: none"> ▶ The maps showing the movement of customers within the selling / commercial area also include their direction of orientation. ▶ The sales department map is marked with the individual sales departments / sections and the most common directions from

	<p>which individual customer segments approach the researched object, including the blind spots.</p> <p>► Also, aggregate information about average speed, number of stops and time spent in individual sales departments / sections is generated for these segments.</p>
3. Customer emotions within the defined store / shop / branch / showroom area.	<p>► A detailed emotional heat map of customers / visitors (showing the parts in which customers feel better in the store / shop / branch / showroom and vice versa, in which they feel worse).</p> <p>► Customer emotions are expressed through an emotional score calculated on the basis of three methods monitoring the activity of the nervous system.</p>
4. Visual attention of customers / visitors.	<p>► Detailed maps of the visual attention of customers / visitors within the defined space.</p> <p>► Visual attention is processed in the form of transparent heat maps, fixation points and clusters.</p>
5. The influence of environmental factors on the overall perception of the defined store / shop / branch / showroom area.	<p>► Environmental factors are processed in the form of scores for individual sales sections / departments, some of them also in graphical form (based on the requirements of the contractor).</p> <p>► An analysis of all the key factors of a given element (e.g., intensity, chromaticity temperature, color rendering index, illumination angle, etc.) is complemented in case of deficiencies within individual elements (e.g., lighting, sound / noise, air quality).</p> <p>► At the same time, suggestions for improvement are developed when identifying deficiencies in terms of environmental factors / distribution of goods / design elements.</p>
6. 360 ° Full HD video recording.	► Detailed video and audio recording, allowing playing back any time period during the movement within the defined space.
7. Air sampling.	► Detailed air analysis (fragrance content) within the sampled sections / departments.

Source: Authors' own processing

Note: * Electroencephalography (EEG) data evaluation is performed in the presence of neurologists with a certificate for electroencephalography

The second technology, **"Information device with continuous feedback, means of presenting information"**, is basically a panel / kiosk which, in addition to presenting audiovisual content to the target audience, allows to get feedback with or without participation of the respondent. The device may have any design so as to not significantly impair the homogeneity of the environment in which it is located. Examples of individual designs can be seen in Figure 2.

Figure 2: Design of intelligent panels with continuous feedback from the target audience

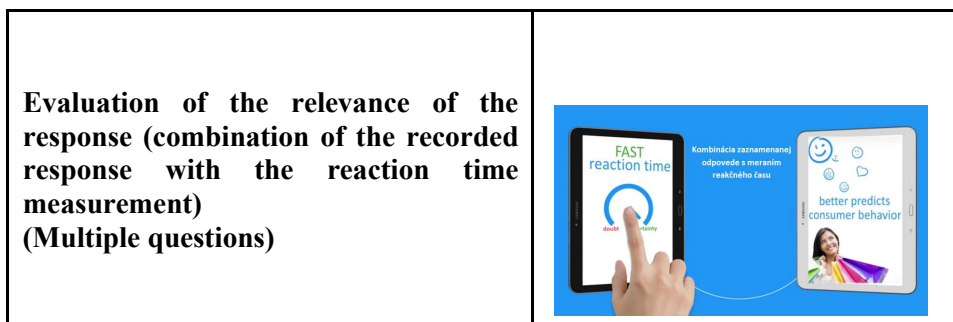


Source: Authors' own processing

Depending on the requirements of the contractor, the device may provide three different combinations of feedback from the target audience, as seen in Table 3. The first option is to obtain feedback via a standard form for recording the responses with the respondents' participation. The second option uses the biometric-somatic method, which involves recognizing emotions based on facial expressions without the participation of the respondent. The best solution is to combine the previous methods together with evaluating the relevance of the recorded response based on reaction time.

Table 3: Possibilities for obtaining feedback with and without participation of the respondent

With participation of the respondent = recording responses	
Without participation of the respondent = face expression monitoring	
Combination, both with and without the respondent's participation = face expression monitoring + recording responses	



Source: Authors' own processing

4. Conclusion

In developed economies, the traders' investment in research is generally higher than in Central and Eastern Europe. In Slovak Republic, syndicated types of surveys are preferred, financed by more contractors. On the contrary, in Western countries, besides syndicated studies, more and more tailor-made surveys focus on action steps, that is, directly on implementing changes, for example, in a marketing campaign, assortment, means of introducing a new pricing strategy. Another difference can be seen in the sample of respondents. In addition to nationwide studies aimed at the whole population (such as customer satisfaction), the number of studies focusing on those specific customer groups, which the contractor plans to work with and sees potential for the development within a specific area, is increasing.

In general, research helps to understand the market, as well as all its participants, from the position of the contractor, competition and following their strategies, to customers and customers. Market research using innovative research solutions makes it possible to obtain more accurate information for making decisions directly from the real environment, which is a form of competitive advantage. It can be assumed that their further development and frequency of use depends mainly on the knowledge of managers and disseminating awareness of these research tools.

Acknowledgements

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The Usage of Modern Marketing Tools in Air Transport and Tourism

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Abstract

The article deals with the impact of air transport on travel industry as a part of the regional economy. Developed air transport has increased the mobility of people within the incoming and out-going tourism. Since 2000 the low-cost carriers have been major players in the market of air transport. Even the airports management should respond to dynamically evolving market conditions.

From the international point of view, the presence of a regional airport is often fundamental for the development of regional tourism where linking tourism and functioning of the regional airport for the selected region can have a significant synergistic effect.

The authors have worked with the selected performance indicators of regional airports. Factors, on which they have focused, are quantitative performance indicators and ways of marketing management. There are differences examined in the approach of the management of individual airports, and the causes of lower efficiency of marketing management tools analyzed that have impact on the performance of regional airports.

The authors have used knowledge and findings of their diagnostic missions in selected regional airports, which have been supplemented by a secondary data analysis. The subsequent comparison was used to formulate general conclusions and recommendations which might be available for the management of other regional airports.

Keywords: Air transport, marketing tools, tourism,

JEL Classification: L93, M31, R41

1. Introduction

The importance of aviation for tourism and the regional economy is significant. It enables mobility of both residents of the region and its visitors. The tourism industry itself brings economic, social, and cultural benefits. These benefits can be expressed as evidenced by various scientific studies. Air transport, as shown by studies, has these impacts, including economic ones. The tourism industry as indicated by the studies has economical, social, cultural implications. The authors focused on the benefits and impacts of tourism and air transport in the European Union, in the Czech Republic and Poland. Estimates of the combined effect of direct, indirect and induced impacts vary between 1.4 - 2.5% of GDP (exclusive of tourism). This may substantiate the conclusions of other studies, namely the study by the organization (ATAG 2008) and (ACI 2015). It states that the quality of the air service affects the company when deciding where to invest. The air transport influences the mobility of population, and has many side-effects, which are showed in a study presented by York Aviation and the Airports Council International, entitled "The Social and Economic Impact of Airports in Europe". This study also deals with the creation of jobs related to the air transport in the region equipped by airport (York 2004). These studies are validating the fact that regional aviation can play and is playing a vital role in ensuring that free movement, in the EU which is one of the basic principles of European Union community. So the free movement is a reality not only for people living in major capital cities but also for European Union Citizen living outside of these areas. The existence of regional aviation is ensuring that these cities and regions enjoy not only the

benefit brought about by greater mobility but also by generating tourism, providing access to new markets and by attracting great inward economic investment.

1.1 Impact and benefits of air travel and tourism on economy

As mentioned in the previous chapter (introduction) the impact of aviation and tourism on the economy is very important (Table 1). The authors examine these impacts in the selected major regions in the Czech Republic and Poland. These positive effects do not come by themselves, yet they must be supported in most cases with managerial decisions and actions in different areas (operational, marketing, financial ones). The key factors in the authors' opinion are sales and marketing as tools for supporting and maintaining the existing and acquiring new customers. They aimed their research at the issues of interoperability using modern forms of marketing communication and performance of the selected regional airports. Research was conducted for Ostrava and Brno airports in the Czech Republic and Katowice and Krakow airports in Poland. The authors focused on the potential of airports (a number of residents in the catchment area of the airport), airport operational performance (a number of passengers), the marketing communications use and the ability to work with modern tools of marketing communication as a major trend for addressing existing and potential customers.

Table 1: Data for Travel, Tourism and Aviation

	Data for Travel and Tourism (2016)		
	Czech Republic	Poland	European Union (2017)
GDP Direct Contribution	USD4.9bn/2.5% of GDP	USD8.5bn/1.8% of GDP	USD698.7bn/3.5% of GDP
GDP Total Contribution	USD15.0bn/7.8% of GDP	USD21.1bn/4.5% of GDP	USD1,896.0bn/9.6% of GDP
Employment Direct Contribution	218,500 jobs/4.3% of total employment	305,000 jobs/1.9% of total employment	14,229,000 jobs (3.6% of total employment)
Employment Total Contribution	475,500 jobs/9.3% of total employment	715,500 jobs/4.5% of total employment	35,848,000 jobs/ 9.1% of total employment
Visitor Export ¹	USD7.0bn/4.5% of total exports	USD11.3bn/4.6% of total exports	USD506.7bn/5.7% of total exports
	Data for aviation transport		
	Czech Republic	Poland	European Union
Number of Passengers	12,672	28,907 million	873,4 million
Number of flights	212 527	309 795	7,560,360
Number of jobs in air transport industry	23000	54000	2.5 million
Number of jobs for airlines and handling agents	9000	16000	533,000
Number of jobs for airport operators	9000	21000	174,000
Other jobs supported by aviation industry	5000	17000	1.8 million
Commercial airports	5	15	667
Network Airlines	3	4	387

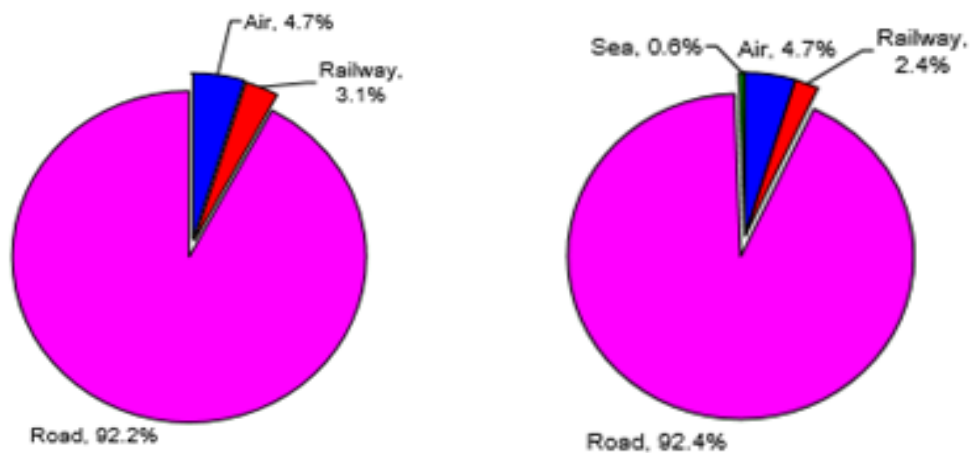
Source: ATAG,2016, author's research

In addition to potential of the airport they made up by a number of populations in the catchment area and the region's economic performance. The authors formed hypothesis that the number of

customers (of passengers) also depends on the ability of airport management to actively work with marketing tools. In their research they focused on modern instruments of online marketing communication while trying to search a possible correlation between the number of passengers and airport activity in the field of online marketing communications.

Tourism, both for business and leisure purposes, makes a large contribution to the Czech economy, with foreign visitors spending just over CZK 141.0 billion (aprox. USD 5.6 billion) in the Czech economy each year. Just under 5% of these visitors arrive by air, so that passengers who arrive by air probably spend around CZK 6.6 billion (aprox. USD 0,26 billion) in the Czech Republic. In Poland the situation is almost the same with foreign visitors spending just under PLN 30.8 billion (aprox.USD 4.9 billion) in the Polish economy each year. Just fewer than 5% of these visitors arrive by air, so that passengers who arrive by air probably spend around PLN 1.4 billion (aprox.USD 0,2 billion) in Poland. (ATAG, 2016).

Figure 1: Structure of Foreign Visitors Arrivals by Mode of Transport in 2015 Czech Republic and Poland



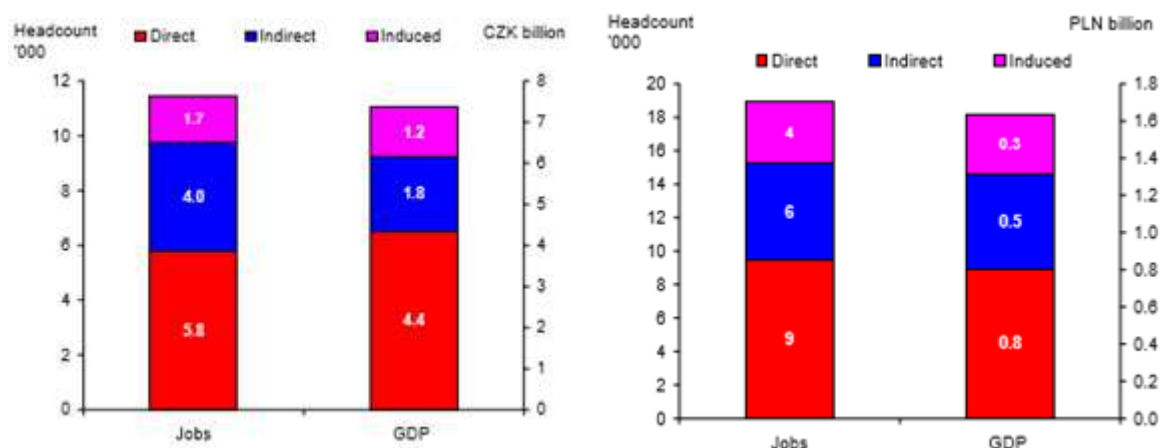
Source:(ATAG 2016)

In general 4 types of impact of air transport on regional economy are recognized:

- Direct impact it means jobs and income related to airport operation
- Indirect impact is presented by jobs and income generated by suppliers of services and goods
- Induced impact are jobs and income generated by the spending of direct and indirect employees
- Catalytic impact represents jobs and income generated by business established due to functional airport e.g. incoming tourism and inward investment(MATUŠKOVÁ,LETÁVKOVÁ, 2014).

Figure 2 Travel and Tourism's Contribution to Czech and Poland GDP and Employment shows basic statistics as for above mentioned impacts on Czech and Polish economy.

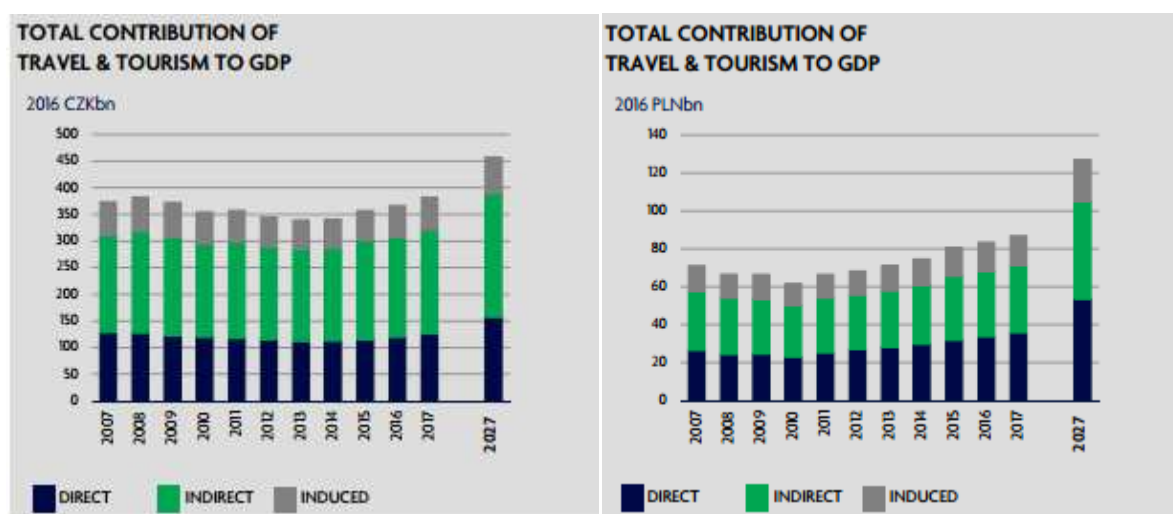
Figure 2: Travel and Tourism's Contribution to Czech and Poland GDP and Employment



Source: (ATAG, 2016)

The figures 2 and Figure 3 shows total contribution of travel and tourism to GDP in local currencies. To make comparison in absolute values possible below figure 2 and figure 3 local currencies are expressed in USD and are showed in Figure 4: Contribution of Travel and Tourism to GDP in USD.

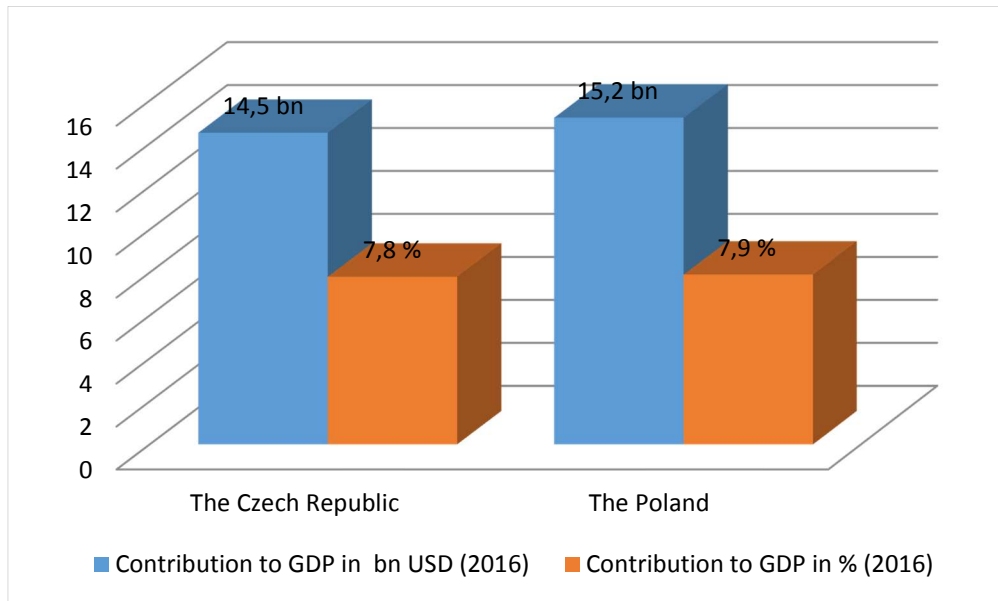
Figure 3: Total Contribution of travel and Tourism to GDP of Czech Republic and Poland



Source:(WTTC,2017)

The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts, see fig. number two) was CZK366.1bn in 2016 (aprox. USD 14.5 bn - 7.8% of GDP) and is expected to grow by 4.2% to CZK381.4bn (aprox. USD 15.2 bn - 7.9% of GDP) in 2017. The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts, was PLN83.3bn in 2016 (aprox.USD20.8 bn - 4.5% of GDP) and is expected to grow by 4.1% to PLN86.8bn (aprox. USD 21.7 bn - 4.6% of GDP) in 2017. The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts, see page 2) was USD1,896.0bn in 2016 (9.6% of GDP) and is expected to grow by 2.9% to USD1,950.3bn (9.7% of GDP) in 2017 (WTTC,2017).

Figure 4: Contribution of Travel and Tourism to GDP in USD



Source: (WTTC,2016)

Figure 5: Contribution of Travel and Tourism's to GDP of EU



Source:(WTTC,2016)

The total contribution of Travel & Tourism to GDP (including wider effects from investment, the supply chain and induced income impacts, see page 2) was USD1.896.0bn in 2015 (9.6% of GDP) and is expected to grow by 2.9% to USD1,950.3bn (9.7% of GDP) in 2016 (WTTC,2016).

1.2 Social media marketing

Social media marketing, or SMM, is a form of internet marketing that implements various social media networks in order to achieve marketing communication and branding goals. Social media marketing primarily covers activities involving social sharing of content, videos, and images for marketing purposes, as well as paid social media advertising. In the last few years, Social

Media has grown from being a mere digital channel for “socializing” with other media, into one of the most powerful digital marketing tools for brands and businesses.

Social media marketing is linked with the term of digital technologies, which actually include both hardware and software, is meant a set of electronic technologies used by individuals (users) both for social or educational resp. entertainment purpose. Digital technologies include PC's, smart phones, tablets, game consoles, laptops etc. and necessary knowledge and skills required to manage all web 2.0 technologies (communication, use of information and multimedia resources, Skype, blogging, YouTube and many others (SVĚTLÍK, BAČÍKOVÁ, 2015).

It has its relation also with trend of Word of Mouth (one of possible forms how to disseminate information about a product, brand, service or company among existing and potential customers). But what is the motivation that people are willing to share, both in offline and online form WOM, their knowledge and experience with a certain brand or services to other people? It is a fact, that today, and thanks to the internet we are overloaded by the information of all kinds. But how we can choose the right one, which is correct and relevant. Let say, when we consider the purchase of particular product, brand or service, for example. WOM can help. Fortunately, there are trustworthy professionals, experts in certain areas of human reality, who themselves seek opportunities to share their knowledge with others (they are called market mavens). Moreover, most people have a need to share with others information concerning current affairs and issues. Another motivation for communication within WOM can be explained by the theory of cognitive dissonance. Once a consumer identifies with a certain brand and he faces negative information on his/her favorite brand, it gives him a feeling of cognitive incongruence. This feeling can be eliminated by obtaining more details about the brand. For example, through his/her visit to a specific discussion forum which concerns the relevant topic. Other motivation is altruism, reciprocity, increased social prestige especially by the possibility of upgrading the status etc. But even in these cases, play an important role the other variables, next to other cultural factors or product category (SVĚTLÍK, VAVREČKA, 2016).

The Pros of Social Media Marketing for Business(TUTEN, SOLOMON, 2014).

Social Media Marketing is Low Cost

One of the main advantages of SMM over traditional media advertising and other digital marketing channels is the considerably lower cost that makes it very appealing for businesses.

Social Media Marketing Caters to a Big Audience

One of the main advantages SMM has over traditional media marketing is that traditional marketing only caters to a fixed audience (eg. regular magazine readers; TV viewers) while SMM has the potential of reaching out to a very big audience that is totally unlimited in scope and reach – from around the globe.

Social Media Marketing is Fast

If you have something to promote or have some news or fresh information that you would like to share or inform to your target markets, you can rely on Social Media Marketing for fast action and fast results.

Social Media Marketing Generates Interaction

The beauty of Social Media Marketing is that it is based and is powered by social interaction, which in the long run develops trust you and your audience.

Social Media Marketing Nurtures Brand Loyalty

The more you have healthy interactions with your targeted audiences on social media that definitely boost your online reputation, and in the process develop brand loyalty.

Social Media Marketing is Good for Customer Service

Many customers spend time on social media channels and if they have something to say to a brand or a company, they would go through their social media page.

The Cons of Social Media Marketing for Business(BARKER, BARKER, BORMANN, NEHER, 2012)

Social Media Marketing is Time Consuming

Industry reports say that up to 64% of digital marketers spend at least 6 hours on Social Media Marketing. A good 37% on the other hand spends more than 11 hours on SMM. This is relatively time consuming for many business owners who want to get results from their SMM efforts.

Social Media Marketing Generates Negative Users

One of the problems with Social Media is that it attracts all sorts of people, even the negative and malicious ones. These negative elements include spammers, scammers, trolls and all other sorts of malicious individuals all out to do harm to your online reputation.

Social Media Marketing Makes You Lose Control

What you publish online, especially through social media channels, can really go viral and spread like wildfire in the online sphere. This can prove beneficial for you if it generates positive results.

Social Media Marketing ROI is Hard to Define

A recent study highlighted that up to 89% of digital marketers really would want to know the ROI of their social media efforts. Only 37% can measure the results of their SMM, while another 35% say they are really not sure if they are measuring ROI properly – and 28% say they really don't know how to measure ROI at all.

Tools of social media marketing

Basic and most popular tools for social media marketing are FACEBOOK, INSTAGRAM, YOUTUBE, TWITTER and MOBILE APPS.

2. Data and Methods

The authors have used knowledge and findings of their diagnostic missions on selected regional airports, which have been supplemented by secondary data analysis.

For the purpose of creating the article the method of the literature search and expert articles have been applied, further, we have analyzed the expert studies. In order to confirm the hypothesis, diagnostic mission methods. The diagnostic mission included the secondary data collection, airport traffic observation and the interview with airport experts (About 10 interviews were realized with commercial and marketing departments of selected airports during the period of 3 months - from December 2016 to March 2017). These methods have been used along with the horizontal and vertical analysis of selected indicators, as well as methods of expert estimations. With the aim of creating the final part of the article, synthetic and deductive procedures have been applied too.

3. Results and Discussion

The research focused on two major regional airports in the Czech Republic and Poland. The potential of airports affects the population in the country and in the region. In the case of Poland, it is necessary to take into consideration the increased mobility of citizens of the Republic of Poland in comparison with the mobility exhibited by the citizens of the Czech Republic, both in business trips and tourist areas. The research allowed comparing the selected airports at national and international level. Despite the fact that in the performance of the selected airports in the Czech Republic and Poland there is a significant difference, the comparison of relatively well performing airports offers interesting conclusions. Provozní data byla získána během letní sezóny 2016 (June – September). The data about social media marketing were collected in april 2017. The research results are presented in Table 2: Selected airport data

Table 2: Selected airport data

Factors/Airport Start-up year	Ostrava 1959	Brno 1954	Katowice 1990	Krakow 1964
Catchment area up to 90 minutes of distance (number of inhabitants in mil.)	5,9	1,7	11	10,4
Operated regions	Moravian-Silesian Region Region of Olomouc Region of Zlín Northwest Slovakia Southern Poland	South-Moravian region Region of Olomouc Region of Vysočina	The Voivodeship of Silesia The Voivodeship of Łódź The Voivodship of Holly Cross The Northern part of Moravian- Silesian Region	The Voivodeship of Lesser Poland The Voivodeship of Silesia The Voivodship of Holly Cross The Voivodeship of Subcarpathia The Northwestern part of Slovakia
Number of passengers 2015/ 2016	308 933/258 223	466 046/417 725	3 069 249/3 221 261	3 817 792/4 221 173
Number of flight connections/regular connections/charter flights.	21/16/5	21/16/5	74/34/40	67/59/7
Number of final destinations/States	26/12	21/12	84/26	67/19
Number of airlines/"traditional"/lowcost airlines	8/6/2	8/4/4	24/21/3	21/15/6
Web pages/language mutations	YES/CZ, EN, PL	YES/CZ/EN	YES/PL/EN/CZ	YES/PL/EN/SK
Official facebook profile/Start-up year/ number of fans	YES/4 342/2010	YES/1586/2015	YES/42 825/2014	YES/32 083/2013
Average number of contribution per day/average number of „likes“ a for contribution.	0,5/33	0,33/16	2/210	2/180
Official Instagram profile/ number of followers	NO	YES/56	YES/10 900	YES/4 655
Official Youtube canal/number of followers/number of videos	NO	NO	YES/1200/69	YES/253/44
Official Twitter profile/number of followers	NO	NO	YES/6 364	YES/10 400
Mobiles Applications	NO	NO	NO	YES (Android, iOs)

Source: author's research

The research results presented in Table 3 show that the airports Ostrava, Brno and Krakow have a relatively long history, during which they could build and strengthen relationships with customers. Katowice airport, formerly a military airport, began to build these relationships over the past 20 years. The different size of catchment areas of the airports must be taken into consideration too; Katowice and Krakow have over 10 million potential passengers meanwhile Ostrava and Brno can count with 6 million respectively 2 millions of potential passengers.

The operating performance of the selected airports in the Czech Republic and Poland recorded a completely different course in a year on year comparison of 2015 and 2016, although air traffic in Europe shows an increase. The airports of Ostrava and Brno declined in absolute terms

by about 50,000 passengers. The significant growth was recorded in Krakow in absolute terms more than 200 000 passengers and the airport of Katowice increased by about 60 000 passengers. The number of passengers at the airports in Ostrava and Brno decreased despite the opening of new routes in 2016.

Although the number of airlines at the airports of Ostrava and Brno is the same as at airport Brno it has a greater number of passengers. The difference was caused by the aircraft operation of low cost carriers with a greater capacity and frequency of flights from Brno and probably a higher load factor for charter flights from Brno. Results of Polish airports reflect a greater range of routes and destinations. Although Katowice airport has a higher number of airlines and destinations reached about 1 million passengers less than Krakow airport. The reason will probably be the deployment of smaller types of aircraft on scheduled flights from the airport in Katowice and deploying of smaller aircraft type by Wizzair from Katowice - Airbus A320, mostly with a capacity of 150 passengers and on the other hand deploying the aircraft Boeing B 737-800 (189 - 200 passengers) by Ryanair from Krakow in the segment low-cost carriers.

The Tools of Facebook

The table shows that both Brno and Ostrava airports, have managed since the founding of the official Facebook site to get an average of 700 fans in one year. In contrast, Krakow Airport and Katowice Airport range from 14,000 fans per year (Katowice) and 8,000 fans per year in the case of Krakow. This number reflects both a higher performance of the airport (a number of passengers), but also better ability to work with the posts on social networks. This fact is reflected also in interesting numbers in the average number of posts per day, where both Czech airport hold a diameter less than one post per day and the number of posts by marking "like" or sharing. Both Polish airports maintain on average 2 messages per day and the average number of "like" is at an average level of 190.

This significant difference can be, among other things caused by the fact that one of the two options to be able to connect to the free Wi-Fi in Polish airports is a sign in Facebook profile of the selected airports and put "like" to the airport profile, which automatically increases the number of fans.

The Tool of Instagram

Instagram as another tool of online marketing communication is a complementary element to Facebook. In its use, Polish airports dominate completely. Ostrava airport does not use this tool yet. Brno airport has official Instagram profile has, but yet does not fully use its potential.

The Tool of YouTube

This tool for sharing videos and vlogs are used only by airports in Poland, more active in this case is the airport in Katowice. Airports in the Czech Republic do not use this tool.

The Tool of Twitter

The situation is the same like with YouTube.

The Tool of Mobile Applications

Mobile Applications are offered only by the airport of Krakow for both platforms – Android and iOS.

In general, Polish airports can make better use of modern tools of online marketing communication for addressing existing and potential customers in comparison with Czech Airports. When comparing airports in Katowice and Krakow we can say that work with these

tools is better mastered by the airport in Katowice. Krakow airport uses better the social network of Twitter and as the only one offer mobile applications for both the most common platform architectures. The use of modern tools of online marketing communication nowadays is not just the domain of young people, as regular users cover the entire age spectrum.

4. Conclusion

The operating performance of the airport depends, undoubtedly, on the potential of the airport and its catchment area. Nevertheless, we can deduce that a good use of modern tools of marketing communication with existing and potential customers can contribute to stabilization and the increase in the number of customers eventually. Polish Krakow and Katowice airports can serve as a "good example" for regional airports in the Czech Republic. The active use of modern tools of marketing communications can help reverse the negative development of airports in Ostrava and Brno. The issue is topical in terms of the interconnection of air transport and tourism, which has undoubtedly a positive impact on the regional economy, the social situation in the region and its cultural development. The use of tools of online marketing communication is a hot topic and the authors are preparing the expansion of research in other regions.

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The Level of Management Students' Acquired Knowledge of Selected Universities of Slovak Republic

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Abstract

To evaluate the level of students' acquired knowledge has been used Hofstede's national culture theory. This theory includes five dimensions of national culture. For each dimension (A Power distance, Individualism and collectivism, Masculinity and femininity, Certainty and uncertainty, Time orientation) have been identified twelve variables. Each dimension has been applied to an individual management problem. The students have been considering the mutual importance of the variables. The importance has been expressed by the number of levels of significance. The higher number of levels of significance, there was the better understanding of students of substance and mutual importance of individual variables.

Keywords: Level of significance, power distance, resolution ability, variables of significance.

JEL Classification: M5, M54, M59

1. Introduction

Currently, the reality is that there are national and regional cultural differences. In fact, these differences can become for the management of organizations one of the key factors affecting their success and especially for the management of multinational, multicultural organizations, whether public or private. Geert Hofstede is considered the "father of modern cross-cultural research". Hofstede had compared culture to a "software of the mind", which has meant the opportunity and ability of human individualities to predict the behavior of interacting participants. This "Software" is programmed long-term, which implies the similarity of reactions under similar circumstances. This programming is invisible to people. The programming is reflected in the words, actions and one's behaviors that are observable.

According to G. Hofstede's is national culture characterized by five dimensions (A power distance, Individualism and collectivism, Masculinity and femininity, Certainty and uncertainty, Time orientation). Each dimension represents for the manager the separate problem. For each dimension was selected twelve variables that reflect its substance.

The students have been considering the variables (in the terms of their substance and mutual importance) for each dimension. The level of acquired knowledge is the number of levels of significance.

The higher number of levels of significance, there was better understanding of the issue. The solved problem: Using the theory of G. Hofstede's national culture (5 dimensions), mutual understanding of the nature and significance of the variables (12 for each dimension)

2. Data and Methods

From a methodological point of view was observed value the significance of individual variables. To ensure a high validity of the results was elected Student's paired t-test comparison

variables (Riečan et al.1992, p. 302). Student's t-test was used to compare the difference between arithmetic average of pairs of the investigated variables (ranked by maximum for a minimum value), see (1), (2), (3), (4), (5), (6) and (7). On the based on the results of tests we can identify variables which differ significantly and the refore respondents their values differently.

$$\text{The difference between the variables: } d = \sum_{i=1}^n d_i \quad (1)$$

$$\text{The squared difference: } d^2 = \sum_{i=1}^n d_i^2 \quad (2)$$

$$\text{Average difference: } \bar{d} = \frac{1}{n} \sum_{i=1}^n d_i \quad (3)$$

$$\text{The average value of the second squared differences: } d^2 = \frac{1}{n} \sum_{i=1}^n d_i^2 \quad (4)$$

$$\text{Dispersion of differences: } \sigma^2 = \overline{d_i^2} - \bar{d}_i^2 \quad (5)$$

$$\text{Unbiased estimate of the standard deviation: } s^2 = \frac{n\sigma^2}{n-1} \quad (6)$$

$$\text{The test value: } t = \frac{\bar{d}\sqrt{n}}{s} \quad (7)$$

Index of power distance refers to the relationships and interdependencies respectively independence and emotional proximity respectively distance between subordinates and superiors in the national or regional culture.

For research purposes for each dimension of culture - in consultation with experts in the field - were selected following variables "Power distance":

Power distance

- x₁ – superiors and subordinates are not equal to each other;
- x₂ –superiors' openness by an opinion of the subordinates;
- x₃ – duty to take decisions, to give orders to subordinates;
- x₄ – the acceptance of the team members' participation on the decision making process;
- x₅ – significant salary differentiation in terms of upper and lower organization;
- x₆ – privileges and symbols belongs to the performance of the managerial function;
- x₇ – acceptance of subordinates' dissenting opinions;
- x₈ – mutual distrust of employees is normal;
- x₉ – younger age superiors are preferred before older age superiors;
- x₁₀ – organization's hierarchy reflects the real existential and social inequality;
- x₁₁ – subordinates are not afraid to disagree with their democratic superior;
- x₁₂ – hierarchy in the organizational structure is not considered as a unalterable entity.

Variables immanent to the culture of high power distance: x₁, x₃, x₅, x₆, x₈, x₁₀.

Variables immanent to the culture of little power distance: x₂, x₄, x₇, x₉, x₁₁, x₁₂.

In the context of the above was conducted the research at the research sample of 120 management students of selected universities in the Slovak Republic: University of Žilina in

Žilina – 1st year of study, The Catholic University in Ružomberok – 1st year of the study and University of Matej Bel in Banská Bystrica- 1st year of study.

3. Results and Discussion

Calculated models are made up of different levels of significance, which contain a different number of variables.

E.g. in the dimension of „power distance“ (*Table 1*) at the Catholic University of the model consists of four levels of significance - the first level contains the variable x_3 , the second level contains the variable x_2 , x_{12} , x_9 , x_4 and x_7 , the third level contains the variables x_5 , x_6 and x_{10} , the fourth level contains variables x_1 , x_{11} and x_8 .

The University of Žilina, this model consists of four levels of significance - the first level contains the variables x_4 and x_3 , the second level contains variables x_{12} , x_7 , x_2 , x_9 and x_8 , the third level contains the variables x_{10} , x_{11} , x_6 and x_5 , fourth level contains the variable x_1 .

At the University of Matej Bel, this model consists of five levels of significance - the first level contains the variables x_3 and x_{12} , the second level contains the variable x_4 , x_2 and x_7 , the third level contains the variables x_9 , x_6 , x_5 , x_{11} and x_{10} ; fourth level contains the variable x_1 the fifth level contains x_8 .

Analogical was ascertained structures of models of selected universities - the "Individualism and Collectivism", "Masculinity and Femininity", "Certainty and Uncertainty" and "Time orientation".

Table 1: Models of variables cultural dimensions of "Power distance"

Catholic University			University of Žilina			University of Matej Bel		
Variable / Arithmetic average	Compared variables / Value of test	Significance of variables	Variable / Arithmetic average	Compared variables / Value of test	Significance of variables	Variable / Arithmetic average	Compared variables / Value of test	Significance of variables
X ₃ 9.18	X ₃ - X ₂ 2.28	1.LS	X ₄ 9.26	X ₄ − X ₃ 1.00	1.LS	X ₃ 8.92	X ₃ - X ₁₂ 1.41	1.LS
			X ₃ 8.90	X ₄ − X ₁₂ 3.14		X ₁₂ 8.00	X ₃ - X ₄ 2.40	
X ₂ 7.86	X ₂ - X ₇ 1.79	2. LS	X ₁₂ 7.42	X ₁₂ − X ₈ 1.42	2. LS	X ₄ 7.66	X ₄ - X ₉ 2.06	2. LS
X ₁₂ 7.84	X ₂ - X ₅ 2.52		X ₇ 7.36	X ₁₂ - X ₁₀ 2.97				
X ₉ 7.76			X ₂ 6.88			X ₂ 7.52		
X ₄ 7.12			X ₉ 6.84					
X ₇ 6.71			X ₈ 6.46			X ₇ 7.52		
X ₅	X ₅ -	3. LS	X ₁₀		3. LS	X ₉	X ₉ -X ₁₀	3. LS

6.16	X ₁₀ 1.00		5.34			6.58	2.06	
			X ₁₁ 5.24	X ₁₀ - X ₁ 3.72		X ₆ 6.30	X ₉ - X ₁ 3.05	
X ₆ 5.69	X ₅ - X ₁ 2.50		X ₆ 5.06			X ₅ 6.10		
X ₁₀ 5.57			X ₅ 4.88			X ₁₁ 5.68		
						X ₁₀ 5.26	X ₁ - X ₈ 2.47	
X ₁ 4.73	X ₁ - X ₈ 0.84							
X ₁₁ 4.47		4. LS	X ₁ 3.06		4. LS	X ₁ 4.76		4. LS
X ₈ 4.27						X ₈ 3.56		5. LS

Source: Author's own processing

Note: LS – "Level of significance"

Variables of dimension "Power Distance" - this issue was the best understood by students of the University of M. Bel (5 levels of significance of variables), next were students of University of Žilina and Catholic University (4 levels of significance of variables).

Variables of dimension "Individualism and Collectivism" - this issue was understood by students of all universities as well (3 levels of significance of variables).

Variables of dimension "Masculinity and Femininity" - this issue was the best understood by students of University of Žilina (4 level of significance of variables), next were students of University M. Bel (3 levels of significance of variables) and the Catholic University students (2 levels of significance of variables).

Variables of dimension "Certainty and Uncertainty" - this issue was the best understood by students of the University of Žilina (5 levels of significance of variables), next were students of the University M. Bel (4 levels of significance of variables) and students of the Catholic University (3 levels of significance of variables).

Variables of dimension "Time orientation" - this issue was the best understood by students of the University of M. Bela (4 levels of significance of variables), next were students of the University of Žilina (3 levels of significance of variables) and students of the Catholic University (2 levels of significance of variables).

On the basis of the values (*Table 2*) it can be stated that in general was the best understood by students of selected universities the issue of dimension "Power Distance" (13 level of significance of variables), a problem of dimension "Certainty and Uncertainty" (12 level of significance of variables) and other dimension (9 levels of significance of variables).

Table 2: Number of levels and the number of variables depending on dimensions of selected universities

UNIVERSITY	The number of occurrences / Number of occurrences of variables at each level				
	<i>Power distance</i>	<i>Individualism and Collectivism</i>	<i>Masculinity and Femininity</i>	<i>Certainty and Uncertainty</i>	<i>Time orientation</i>
University of Žilina in Žilina	4 / 2, 5, 4, 1	3 / 4, 4, 4	4 / 4, 4, 3, 1	5 / 4, 2, 4, 1, 1	3 / 5, 5, 2
Catholic university in Ružomberok	4 / 1, 5, 3, 3	3 / 6, 5, 1	2 / 7, 5	3 / 5, 3, 4	2 / 7, 5
University of Matej Bel in Banská Bystrica	5 / 2, 3, 5, 1, 1	3 / 3, 5, 4	3 / 5, 4, 3	4 / 5, 4, 1, 2	4 / 2, 5, 4, 1

Source: Author's own processing

4. Conclusion

The aim of this paper was to measure the level of knowledge of students of selected universities using the theory of G. Hofstede's dimensions of national culture, with application for the managerial functions execution. Based on these results it can be stated that the management students have obtained the issue at different levels. The obtained results are useful for teachers as a credible basis for further improvement of the educational process. The authors believe that the aim that they set has been achieved.

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The formation of innovative mentality of students of Russian agricultural universities

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Abstract

The creation of innovative economics in Russian Federation requires the provision of innovation-oriented personnel in all areas including agriculture. Based on the studied materials, authors hypothesize the necessity of extension of innovation courses in educational process for developing innovation potential of the future specialists. In order to validate the hypothesis in Vavilov Saratov State Agricultural University (Saratov region) was conducted a sociological study, involving 424 students from different areas of training. Part of the respondents who did not learn the basics of innovation, do not realize the importance of knowledge of innovation processes both in the education system and in future profession. According to the authors, this could lead to unformed innovation-oriented skills, serious mistakes in the work, and negative consequences for the country's resource potential.

Keywords: agricultural economy, educational process, innovation.

JEL Classification: O12, O13, O15, O18, O32.

1. Introduction

In the Russian Federation, despite the crisis, the ongoing development of the innovation sector continues. These trends are typical for agriculture [5, 6]. Therefore, agricultural economy is currently experiencing a demand for innovation-oriented personnel [1, 2, 3]. Agrarian universities may solve the problem [4], if they will actively expand the block of disciplines on innovation in education. According to the authors, it will contribute not only to the formation of intuitive perception of innovations of future specialists. It will also contribute to conscious understanding of the laws of the innovation process, features of the development of innovative environment; skills of accounting not only the benefits but also the negative effects of innovation, the ability to rationally assess the prospects for innovation from the point of economic, environmental and social efficiency. To analyze the innovation potential of the agricultural university's students in 2014 authors conducted a survey of 424 respondents on "Assessing the readiness of university's students to the implementation of agricultural innovation (on example of Vavilov Saratov State Agricultural University)." The sampling was formed from students of various courses to explore students' opinion, among students familiar with the basics of innovation (the third course students), and unfamiliar with the specifics of innovation. This survey was part of a large-scale sociological research "Study of willingness of villagers to innovation" that swept 1486 respondents. The project provided an opportunity to examine the students' opinion about innovation, their desire to take part in this process, and willingness to innovate in the professional sphere.

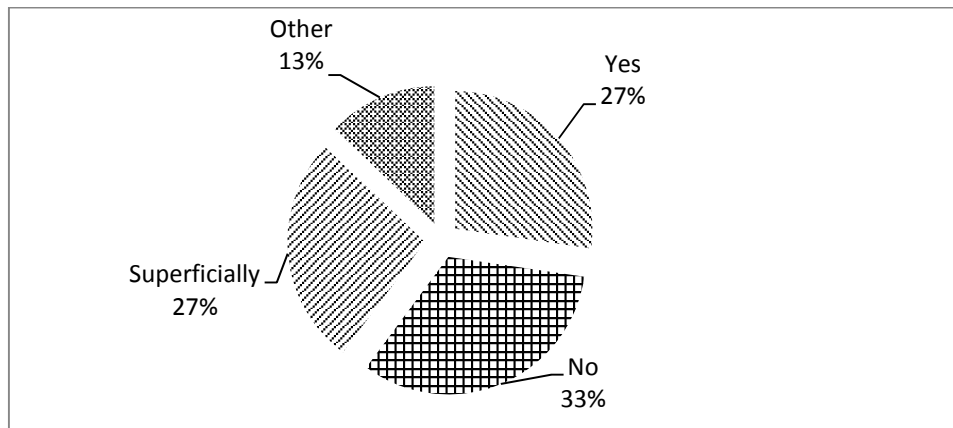
2. Data and Methods

Respondents answered several questions:

1. Are you familiar with the theoretical foundations of innovation?

2. Is it important for the university to study the discipline of innovation?
3. Indicate your sources of information on innovation.
4. Will you need your acquired skills and knowledge of innovation in your future work?
5. In your opinion, will you have the opportunity to improve your work by new technologies?

Figure 1: The structure of the answers to the question “Are you familiar with the theoretical foundations of innovation?”

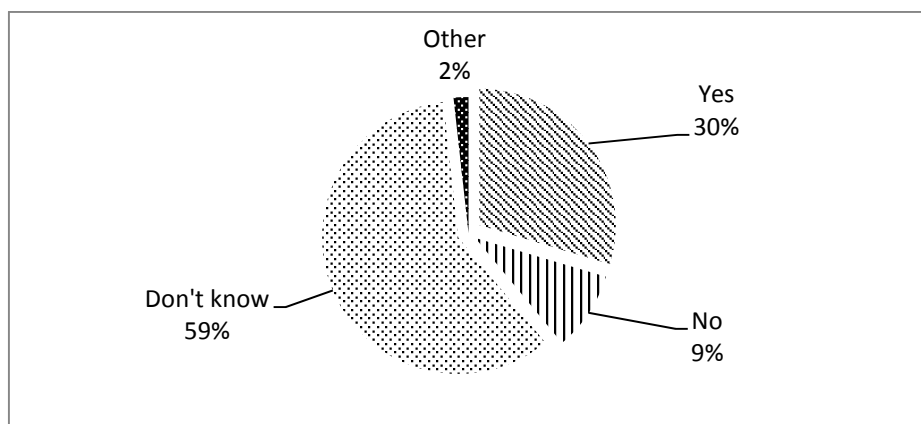


Source: ownresearch

On the first question, 54% of students (i.e. third-year students) responded positively, what indicates the representativeness of sample. The group is divided into two equal parts (27%) due to the structure of curricula of different training areas of undergraduates. Disciplines on innovation are being studied in semesters 5 and 6; the survey was conducted at the beginning of the semester 6.

As shown in Figure 2, only 30% of respondents agreed with the importance of disciplines on innovation, which is 3% higher than the proportion of respondents who studied them in full. Most of the respondents (59%) were not ready to give an accurate answer due to lack of understanding of the importance of these subjects.

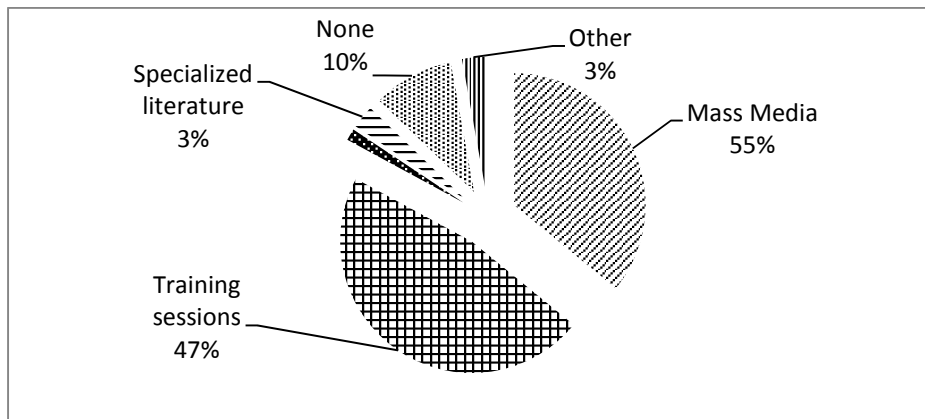
Figure 2: The structure of answers to the question "Is it important for the university to study the discipline of innovation?"



Source: own research

As shown by the results presented in Figure 3, the main sources of information on innovation are the media (55%) and training sessions (47%). About 8% of respondents carry out scientific research individually. 10% of respondents have no interest in this field of knowledge.

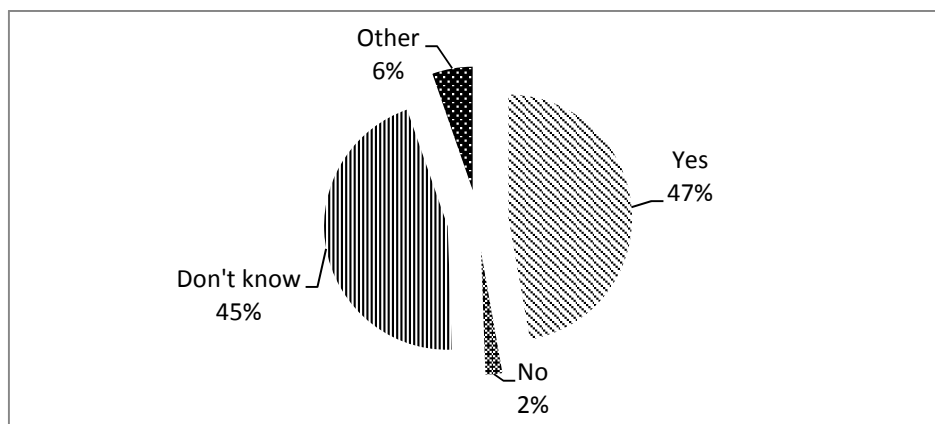
Figure 3: The structure of the answers to the question “Indicate your sources of information on innovation”



Source: own research

As shown in Figure 4, almost half of the respondents believe that the knowledge and skills on the fundamentals of innovation will be needed in the profession.

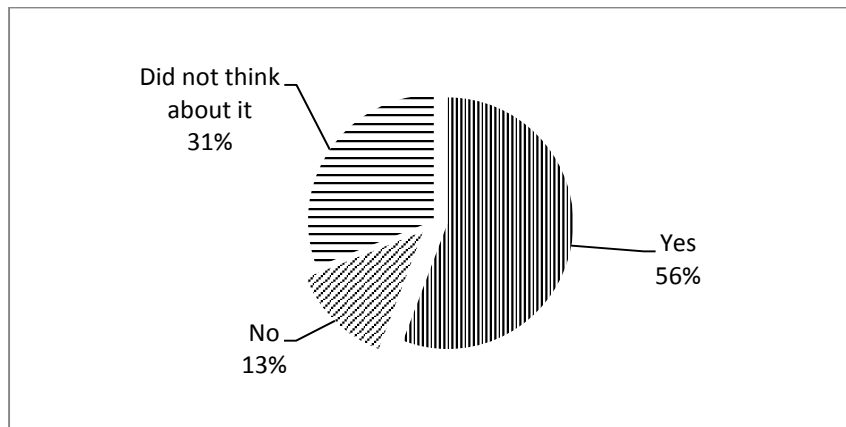
Figure 4: The structure of the answers to the question « Will you need your acquired skills and knowledge of innovation in your future work?»



Source: own research

Most of the students (56%) believe that they will be able to improve their performance through new technologies. Much less (31%) of respondents had never thought about this issue. In addition, 13% of respondents believe that they will not be able to improve their work by new technologies, as shown in Figure 5.

Figure 5: The structure of the answers to the question “In your opinion, will you have the opportunity to improve your work by new technologies?”



Source: own research

3. Results and Discussion

Based on the analysis, authors make the following conclusions. Truthfulness of the hypothesis of the need to expand the block of disciplines on innovation in educational process in order to develop innovative potential of future specialists was confirmed by the results of sociological research. About half of the respondents (i.e. second-year students) who did not learn the basics of innovation, were not fully aware of the importance of knowledge about innovation processes, both in education and in their future profession. For this group of respondents there is also a tendency to get information about innovations from the media, including the Internet. However, according to the authors, this source cannot be considered fully reliable due to inconsistency or inaccuracy of provided information and one-sided problem coverage.

4. Conclusion

Under the conditions of formation and development of innovative agroecconomy for future specialists, lack of basic knowledge on innovation in the professional field involves a number of risks such as institutional, social, environmental and others. Orientation on such sources of information about innovations as the media and independent study, and disregard for fundamental knowledge can lead to unformed skills of innovation-oriented staff, serious mistakes in the work, and negative consequences for the resource potential of agriculture.

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How to Define Industry4.0: The Main Pillars Of Industry 4.0

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Abstract

Evolving customer trends have given rise to a myriad of technological improvements. The evolution of Industry 4.0 has emerged as a German project that describes the strategic approach to digitalization in manufacturing. One of the key features of Industry 4.0 is the creation of highly automated industries through human-machine interaction. In this context, Industry 4.0 will inform future business models driven by the advanced technologies. In this paper, the definition of Industry 4.0 is described based on reviewed literature. In addition, the main drivers of technological advances through Industry 4.0 are analyzed, leading to greater integration, optimal business solutions, organizational communication and other efficiencies. In light of reviewed literature, the best description of the future vision of Industry 4.0 is that put forth by Boston Consulting Group (BCG). This research strives to inform future insights concerning the basic concepts of Industry 4.0 and the path of technology, as well as a basic understanding of Cyber Physical Systems (CPS) and Internet of Things (IoT).

Key Words: CPS, Industry 4.0, IoT, Nine Pillars

JEL Classification: O14

1. Introduction

Manufacturing value chains are complex. Technological progress has created several advantages for business world; new concepts such as digitalization, Internet of Things (IoT) and Cyber Physical Systems (CPS) have gained importance across industries including manufacturing. These terms are used in defining the Fourth Industrial Revolution (Industry 4.0), also known collectively as a German high-tech strategy for future manufacturing industries (Hofmann and Rüsch, 2017). Industry 4.0 triggers a staggering effect by transforming the manufacturing and production processes in industries. In other words, Industry 4.0 will play a significant role in transforming traditional companies into Smart Factories with the help of Internet of Things (IoT) and Cyber Physical Systems (CPS).

A decentralized approach takes great importance in Industry 4.0, which emphasizes independent management of processes and smart objects throughout the network; by doing so, real and virtual worlds collaborate on the processes (Ungurean and Gaitan, 2014). The development of integrated processes and human machine interaction stimulate complexity and agility but also data transmission between value chains. With the help of Industry 4.0, industries will gain operational efficiency both in time, cost and also productivity. Building the infrastructure of IoT offers shared platforms via cloud systems between partners in Supply Chains; therefore business processes can be optimized (Lu, 2017).

The concept of Industry 4.0 has gained great importance in recent years. The increase in usage of computerized systems after the 3rd Revolution, Industry 4.0 deals with creating more digitized systems and network integration via smart systems. Through Industry 4.0, smart systems would enable the replacement of the human-being in certain tasks and ease the working environment. The main goal of the paper is to give the literature review of the definition of

Industry 4.0. Therefore, in this paper, the future vision of Industry 4.0 is examined and what sort of concepts would appear in business environment through Industry 4.0. The vision of Industry 4.0 is described through nine concepts, previously defined by Boston Consulting Group (Rüßmann et al, 2015). Therefore, in this paper, those nine main concepts of Industry 4.0 are further analyzed by giving current examples in the business world.

2. Literature review

Brettel et al (2014) describes how industries have adjusted their production strategy by concentrating on customized products and fast time to market. Therefore, the strategies made possible by Agile Manufacturing and Mass Customization will transform manufacturing industries into more integrated networks with better access to real time data. Hermann et al (2016) defines Industry 4.0 as a collective term for technologies of value chain organizations and the components of Industry 4.0 are categorized as Internet of the Things, Cyber Physical Systems, Internet of Services and Smart Factory. Posada et al (2015) shows the comprehensive overview on the new technologies and describes that visual computing could be seen as the key component of Industry 4.0. Sommer (2015) notes that the important thing is to increase the awareness of Industry 4.0 and its dimensions in order to increase the competitiveness of the companies. Yin and Kaynak (2015) analyze that the intelligent systems and the data generated by them have an important role on the companies' performance levels, cost efficiency and quality and fault free processes. Also, it is necessary to develop the data capacity and statistics of the countries to get ready for technological developments and Industry 4.0. Keijzer and Klingebiel (2017) offer that the strategy required for Industry 4.0 in order to solve the capacity problem of data generated by smart systems and that countries need to be proactive for the technological improvements. Rüßmann et al (2015) shapes the vision of Industry 4.0 on defining nine aspects related to the concept; these are big data, autonomous robots, simulation, horizontal and vertical integration, Internet of Things, the cloud, additive manufacturing, augmented reality, and cyber security. Therefore, companies should be aware of the dimensions and new business models generated by Industry 4.0 in order to create new strategies through Industry 4.0.

3. Research methodology

This paper reviews available literature on the basis of the definition and future vision of Industry 4.0; therefore several papers are analyzed in accordance with Industry 4.0 and its aspects. The databases includes Emerald Insight, Science Direct, IEEE Xplore and Google Scholar; which suggests the most cited articles related to the field. A total of 53 papers were collected by searching for key words such as 'Industry 4.0, CPS, IoT, smart systems, dimensions of Industry 4.0' in search engines; and the journals selected refer to the period between 2011-2017 since the term of Industry 4.0 is mostly used after 2011. After the analysis of several research papers, nine aspects are selected for describing the future vision of Industry 4.0 as the same description of BCG over Industry 4.0 (Rüßmann et al, 2015). Therefore, in this paper, the concepts that shape the future vision of Industry 4.0 are described and how these concepts would be strategically important to the development of new industrial revolution.

4. The vision on industry 4.0: The main pillars

4.1. Big Data and Analytics

The concept of big data applies to large, diverse and complex datasets that affect the organizational decision making of a company concerning their strategy. Therefore, the increase in level of data and improvements on technological capabilities accelerates firms' competitive advantage by increasing productivity, innovation and competition. The decision makers launch

big data projects to solve challenges at the organizational level by monitoring, measuring and managing in a better way. The framework of Big Data could be described as data as a tool (solve traditional value chain problems by existing capabilities), data as an industry (new ventures and develop software systems for handling big data) and data as a strategy (building data resources by developing new innovative business models). The process of big data analytics is to analyze the large datasets, which gives the information about customers' preferences, algorithms in case of correlations, trends and other information. Big data analytics could be used in various areas such as fault prediction to reduce error probability, (Ji & Wang, 2017) and also big data driven predictive algorithms reduce the harm before many damages happen (Seele, 2017). The capability of managing big data gives a competitive advantage to the firms, which could benefit their operations, marketing, customer experience and more. The wider technological shifts will encourage companies to manage mainstream business practices by increasing their talent and infrastructure development. Therefore, big data pushes companies into vast, complex and comprehensive aspects of their business. In the modern world, data generated by machines, cloud solutions and business management has increased more than 1000 Exabytes annually; for example, in consumer packaged goods company, just a single machine produces 5000 data samples in every 33 ms, resulting in 4 trillion samples in per year. From this point of view, the big data concept takes the important role on Fourth Industrial Revolution (Yin and Kaynak, 2015).

4.2. Autonomous Robots

Robots are used in manufacturing industries in order to solve complex tasks which can not be solved easily by a human. By the traditional automation strategy, companies could not fully implement JIT strategies and continuous improvements if they do not opt for autonomous robots. The current improvements in industries would make use of robots less complicated and easily utilized them. Various human-robot interfaces create close cooperation of utilizing robots and human brain. However, the operator usage is also significant since it enables in connection with the station on performed tasks. Therefore, the needed information would be provided by the operator and controls the system, giving instructions to the industrial robots (Hedelind and Jackson, 2011).

The usage of more industrial robots in factories accelerates with Industry 4.0. Robots could be used in several areas such as production, logistics, distribution activities and could be controlled remotely by humans thanks to the human robot cooperation. Several new technologies are introduced by the companies in terms of robotics technology such as Kuka LBR IIWA is achieving sensitive tasks in working places and collaborate with human. This robot has the ability of learning from human colleagues and check, optimize and document the tasks by the help of cloud systems (Aiman et al, 2016).

4.3. Simulation

Simulation tools play a supportive role in production related activities by promoting sustainable manufacturing environment. The digital tools, which achieve the design of the production system, have the ability of self-configuration; therefore, they enable effective shop-floor management. In increasingly competitive business environments, simulation offers the adjustments into complex systems by planning the operations, having the knowledge and information and accurate estimations about the system by using the engineering capacity (Weyer et al, 2016). The strategic planning could be done by simulation models which allows dynamic investigation for production systems by the help of real time data acquired. Therefore, the system creates real time optimization on operations (Uhlemann, 2017).

4.4. Horizontal and Vertical System Integration

Vertical integration refers to the flexible and reconfigurable systems inside of the factory and the extent to which they are fully integrated with each other for achieving agility; horizontal integration deals with the integration of partners within the SCs. The industrial network collects Big Data in order to optimize the system performance and send them into the cloud. This coordination mechanism creates the framework of the smart factory. Therefore, the manufacturing systems are designed as self-organized structure that integrates the every physical objects into each other through smart networks. Besides, cloud based systems enable vertical partners to integrate into each other through shared platforms. The product and process flows would be visualized and tracked by SC members (Wang et al, 2016).

4.5. The Industrial Internet of Things (IoT)

IoT refers to the next technological revolution by giving solutions for computations, analytics etc, by relying on cloud based systems. The main task of IoT is to connect the Internet by collecting data from physical objects. By collecting data, computers or higher level devices make the decision about operations (Rahman and Rahmani, 2017). By the usage of IoT, the business operations become more agile and integrated as well as achieving competitive advantage on the basis of SC. Therefore, IoT capabilities of the firms, would be crucial in the future, which mostly associated with operational agility and effective decision making (Akhtar et al, 2017).

4.6. The Cloud

Cloud computing (CC) brings various advantages to the ICT paradigms such as helping SCs to automate and integrate but also facilitate management and administration. It is the way of virtualizing the resources and services and combining client/server based system. CC includes pools of IT resources that offer storage and processing capabilities in virtual system by serving multiple users. There are three models of cloud computing; Software as a Service (SaaS) where the access depends on the customer purchase such as ERP, Platform as a Service (PaaS) where customers are allowed to access their applications on the cloud such as software developers and Infrastructure as a Service (IaaS) offers the basic activities such as storing capabilities. The best known examples of Cloud systems Google Drive offered by Google, Windows Azur by Microsoft and BlueCloud by IBM (Candel-Haug et al, 2016).

4.7. Additive Manufacturing

Additive Manufacturing, also defined as 3D Printing, refers in producing customized goods for the requirements of customers. The most common way is the prototype and 3D printing methods in order to produce small batches by gaining advantage of having less stock on their hand and overproduction. Rüßmann et al (2015) gives the example of aerospace companies use these techniques to reduce their aircraft weight and raw materials usage such as titanium. Various leading companies in the world invest in 3D printing activities such as Google, Motorola and Apple in order to accelerate continuous smart phones activities. The perceived advantage is a reduction in lead times, production volume as well as increasing mass customization and staying agile (Conner et al, 2014). Additive manufacturing is regarded as the process of making parts from 3D model data. The process activities such as machining, milling are completed by layer upon layer (powder bed, wire fed systems, powder fed) that means small lots products could be produced by less raw materials. In this technology, the tasks enable JIT production system because of succeeding versatility, speed and adaptability (Frazier, 2014).

4.8. Augmented Reality (AR)

Augmented reality is defined as the interactive technology that enables harmony between the virtual world and its users while the virtual world is being used as the part of the real surroundings. The world's first augmented reality glasses were launched by Google known as Google Glass; also, Magic Leap was founded in 2011, which adjust to the human eye by converting the light field Angle and depth (He et al, 2017). This technology enhances human-machine interaction, remote control on maintenance tasks and visual inspection of the human provided by virtually. It could be used in many applications by combining computer generated graphics and physical objects. AR gives the motion control of its users by using sensor technology in order to control the certain tasks.

4.9. Cyber Security

Cyber Security is another important issue, which could have a destructive impact on business environment due to the harmful intents of terror attacks; therefore, preventable solutions and defense systems are necessary against the negative effects of terror incidents. There are some solutions that destroy cyber terror attacks by analyzing previous terror attacks via radiation control before future attacks occur. Besides, it is significant to construct national defense systems and train employees against cyber attacks. Although solutions against cyber war would cost the companies, the expected total cost would not be high considering the potential negative effects of cyber attacks (Cho and Woo, 2017).

Table 1 indicates the summary of the concepts that define the future vision of Industry 4.0.

Table 1: The summary of the concepts that define the future vision of industry 4.0

THE CONCEPTS	THE DEFINITIONS OF THE CONCEPTS	THE EXAMPLES OF THE CONCEPTS
BIG DATA	Large, complex datasets that affect the decision making of companies	Big data analytics, algorithms, software programs
AUTONOMOUS ROBOTS	Solve complex tasks which cannot be solved by human	Kuka Iwaa has the learning ability to achieve some certain tasks
SIMULATION	Mathematical modelling, algorithms that optimize the process	Software programs
HORIZONTAL&VERTICAL SYSTEM INTEGRATION	Integration of inside of the factory and SCs	Smart factories, cloud systems
INTERNET OF THINGS	Connection of the physical objects and systems	Smart network
CLOUD COMPUTING	Shared platforms that serve to the multiple users	Google Drive, BlueCloud, Windows Azur
ADDITIVE MANUFACTURING	3D printing technology, producing in mass customization	3D printers to produce smart phones

AUGMENTED REALITY	Human-machine interaction on maintenance tasks	Google Glass
CYBER SECURITY	Cyber attacks to business environment	National defense systems in order to prevent attacks

Source: Author's own findings

5. Conclusions

Industry 4.0 is the current vision shaping the future of many industries by creating new business models through CPS. Therefore, it is crucial to investigate its dimensions in order to realize efficiencies in the business environment. In this paper, the concepts of Industry 4.0 are shortly described as well as how they would help companies achieve their objectives concerning Industry 4.0. After the reviewed literature, nine pillars (big data, autonomous robots, simulation, additive manufacturing, IoT, cloud computing, augmented reality, horizontal and vertical integration and cyber security) of Industry 4.0 are defined as referring the findings of BCGover Industry 4.0 (Rüßmann et al, 2015). The paper also gives some examples of how they are used in the real life. Therefore, this paper gives the insights for future works conducted on Industry 4.0 and future business models of the companies.

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Advertisement in the movie industry and its effects on consumer expectations

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Abstract

This paper aims to explore the main traits of movie trailers as well as to study its various forms ("classical" trailers, teaser trailers, tv spots etc.), how they came to be and where their place is among the various other methods of movie advertisement. We also explore the channels they use to reach the consumers, the way the general public sees them and how these views might have changed over time (the goal is to expose the main theoretical correlations and various study results from the past years, while the primary research is not part of the paper). All the while the paper also seeks to find out how the general tones of these trailers have changed over the years, how different approaches appeared over time to creating trailers: in what footage was used, the ever changing themes (to continuously tailor the newest consumer and marketing trends) and how early into the production did the advertising start to begin with.

Keywords: advertising, consumer behaviour, cultural marketing, movie consumption

JEL Classification: M300, M310

1. Introduction

The history of movie trailers is almost the same age as cinema itself, the movie industry as a whole is unimaginable without this form of advertisement. Movie trailers, these free previews of coming attractions, can be seen before the start of a feature film in a movie theatre or online (as these two serve as the main focus points with the greatest consumer reach for trailer releases). As Kernan (2004) points out trailers display images from a specific feature film to assert its excellence, ultimately becoming the "Film we want to see", making movie trailers appear as a hybrid form of advertising and cinema, which aligns with today's heavily commercialized cultural forms that make art and marketing increasingly indistinguishable.

While advertisements are usually treated with tolerance from the consumers' side, trailers on the other hand are perceived positively by most movie-goers, furthermore the various forms of trailers that appear before the release of a new movie are responsible for a sizeable chunk of online video data transmission (behind news and user created contents). Visitors of movie related websites and blogs get their first impression of a movie here, which is often the sole reason behind their decision to watch it at a movie theatre or not (Baski, 2010). Naturally not all trailers are praised, sometimes both the general public and movie critics lash out, with the main concerns being that they spoil too much of the narrative, showcase only the spectacular parts or flat out lie in their advertising (or use footage not included in the final cut of the movie).

2. Origins of movie trailers

In the first decades after the birth of cinema there was nothing to promote, attraction was based on the miracle of the moving picture itself, not the specific movies. As time went on and movie theatres started to spread the vanity of the new technology faded, focus shifted from form to content, which first resulted in projecting the movie posters at first, then moving on to actual

trailers later on, with the first studio realize to its importance being Paramount, creating a whole department in 1916 on the purpose to create trailers for their productions. In these first iterations they often depicted one scene grabbed from the movie, focusing heavily on action, spectacle, romance and of course the stars involved, accompanied by large animated taglines (later on with voice-over narration as well) promising even more of the above. Originally these trailers were shown after movies, hence the term "trail", which later on proved to be quite confusing with the preview term also in use for movie advertisement, ultimately using both past and future tenses (Johnston, 2009).

As time went on trailers started to shift once again, to better showcase the narrative and characters involved in the movie as well. As the popularity of this sort of advertising increased, the larger releases got extra attention, like *Alice in Wonderland* (released in 1933) having a musical scene shot only for the trailer in which the characters sang directly to the audience or Alfred Hitchcock showing the future movie goes around the set of *Psycho* (released in 1960) the same way as if it was an actual crime scene (Bokor & Kerzoncuf, 2005). Later innovations included the use of excerpted dialogues instead of narration to present the characters and plot, the use of visual montages, cutting footage to the rhythm of music. Similar to advertising agencies, trailer production companies were formed, the so called "boutique" trailer production served as competition to the in-house trailer operations of movie studios (Kernan, 2004). Following the success of titles like Steven Spielberg's *Jaw* in 1975, nationwide releases became common practice for major titles, which made the movie industry embrace the previously neglected television as a viable market to advertise at. In parallel with the kickstart of MTV, the themes of trailers shifted once again, becoming more similar to music videos, with more usage of music and fast cuts. Later on, as digital editing became available, trailer producers got even more room to tailor their work, with the added possibility of making changes (Baski, 2010). Nowadays the process of creating trailers involves collaboration between not only the production company and the studio, but also with the director and producers, which leads to many revisions (and test showings with focus groups) before the final version of the trailer is achieved.

The public interest and overall positive attitude is reflected in the Golden Trailer Awards (started in 1999), an advertisement festival made in the vein of regular feature film award shows, focusing on the trailer producing talents and achievements (Dornaleteche, 2012) There are also the case of movies that originated from trailer projects, like *Machete* or *Hobo With a Shotgun* that all originated as trailer spoofs before their success inevitably brought these "demo cassettes" to the big screen (Csiger, 2013), or instances like the 2014 leak of the trailer like test footage of *Deadpool* (the source of said leak unconfirmed to this day), which generated such an overwhelming support that the studio had no choice but start the production of the actual movie (Kit, 2016).

3. Movie trailer types

There are many different ways how trailers can differentiate from one another in their style, content, purpose or where they were screened, with many different subcategories further refining what we think about trailers (with new ones appearing ever so often as marketers find new ways to use social media, word of mouth etc.). Following is the main branches we can sort the various forms they have.

3.1 Teaser trailers

However weird it might sound at first glance, nowadays movie trailers get their own trailers. As they play such a flagship role in the marketing campaign of modern movie studios (other

materials being the more stationary forms of posters and their various appearances on billboards, displays, banners etc., and the even more rarely used form of radio advertisement), the most awaited movies' trailers get the so called teaser trailers prior to their release to hype up excitement even more (Baski, 2012). This is the closest in form to the trailer, they usually try to tease the audience without revealing much detail about the movie, for which they employ fast cuts to create a 30-90 second snippet, mainly representing the movie's overall mood (Marton, 1992). Most of the time these teasers are made before the shooting is complete and may even be distributed as early as a year before the release date of the featured movie.

3.2 Standard trailers

The main difference standard trailers have to teasers is their length, as they easily double or triple in time, having the more comfortable 2-3 minutes to introduce characters or better explain the main narrative of the plot (Dornaletche, 2012). Similar to teasers they also often use voice-overs (with a character from the movie or a narrator) and grid editing, which refers to using different scenes of the movie cut together in a fast-paced montage (Kernan, 2004). There are also several versions of the standard trailers as often they have alternative cuts for domestic and international trailers as well as altered trailers for re-releases of movies (usually with more emphasis on the afterlife of the movie, quoting critic responses and listing awards).

The rundown for most of these trailers are usually quite similar, no matter what genre the featured movie is from, setting up the short runtime into 3 acts, one showing the main characters in their natural environment, then the event that spins them out of that habitat and finally the third act with the most visual and emotional tension. These scenes are usually shown to music matching to the footage (pop for comedies, guitar/rock heavy for action, classical instrumental for drama and horror), that often differs greatly from the original soundtrack of the movie (furthermore these music pieces are often made specifically for use in trailers, like the palette of the music production company Two Steps From Hell, whose work got so much traction that they started release whole albums filled with "trailer music" (Friedlander, 2013)), but help the video montage in setting pace for the cuts (Baski, 2010).

3.3 Creative trailers

This type of trailer does not use any footage from the movie itself, instead they are produced independently to promote the movie. Sometimes directors shot their own smaller plots that somehow connected into the movie for advertising purposes (like Hitchcock did for *The Rear Window*, which basically showed the prologue of the movie, putting the otherwise nameless victim in the spotlight (Bokor & Kerzoncuf, 2005)), though it is a quite often used technique in the case of 3D animation movies as well (like the many promotional short features released for *Despicable Me's* minions). It goes without saying, that shooting or creating new footage is a lot more expensive, than using the material available from the feature film, thus these kinds of trailers are not commonly used due to their high cost.

3.4 Featurettes

Featurettes are usually longer videos (5-10 minute long even), consisting of two main subcategories, the "Making of" and the "Behind-the scenes". The main difference between the two is that while the former focuses more on the events before shooting (like how the idea for the movie came to the preproduction phase of hashing out the screenplay all the way to the start of shooting), while the latter gives a glimpse of the on-set work. Both types usually show scenes being shot in-between cast and crew interviews about the experience of making the movie, the special effects used (if any) and the issues they have overcome during the shooting

(Dornaletche, 2012). While it could be argued that these feel more like short documentaries than trailers, their main purpose is still to create interest and promote the featured movie.

3.5 Clip trailers

Clip trailers are made by grabbing an interesting short scene out of the movie and using it to promote without editing or retouching it (Dornaletche, 2012). The tricky part of these kinds of trailers is that for positive results they need to be segments that stand on their own, as they are taken in by the viewers with limited context (usually a few sentences to set up the scene beforehand by the promoting actor, producer or director). These types of clips can be most commonly found in night talk shows where the guest stars usually appear on the condition that they also get to promote their latest movie.

3.6 TV spots

Last but not least are the TV spots, with which we already venture on the line to the next chapter which is distribution of trailers. While these ads are stylistically similar to the standard trailers (often appear as just a shortened version), their length, which is between 30-60 seconds is the same as the teaser trailers, and are more commonly timed to appear closer to, or after the movie's release, as part of the final push of the marketing campaign that leads the audience to the movie theatres. The importance of a TV spot is that it brings the movie trailers into the homes of the consumers, extending the movie industry's marketing to other mediums.

4. Distribution of trailers

The question arises, where and how can and should movie distributors place their trailers to reach their target audience. While advertising in the same medium is generally noted to generate higher influence and usage (Vollans, 2014), the most natural habitat to the trailers of today are the video sharing websites. The internet revolutionized the trailer consumption behaviors, while the format itself has barely changed (so far), with the biggest change being the more dominant appearance of red band trailers (promoting age restricted movies not suitable for children), as previously they could only be found before the showing of other similarly rated movies (as the Motion Picture Association of America [MPAA] states "A trailer advertising a motion picture that is rated R may not be exhibited with a motion picture that is rated G or PG and such trailers will not be considered appropriate to play before motion pictures rated PG-13 that draw younger audiences." (MPAA, 2014)).

The change came naturally, the short length, video-montage style and fast pace are all associated with YouTube to begin with. Seemingly the audience sees the same trailers as before, however their connection to the format became a lot more intimate. Previously it was a question of chance to see a certain trailer, now they can hardly ever be avoided, as thousands of movie related websites, blogs and forums all base essentially their whole operation on showcasing them (Baski, 2010). Even if one does not follow these sorts of sites, social media buzz with friends sharing the videos not to mention their inclusion of "pre-video" ad-spots all guarantee that they get to their audience one way or another. While in movie theatres the common practice is that before the showing of blockbuster (potentially high grossing) movies other blockbusters are advertised, smaller independent ones don't even get the chance, online they still get that shot, as any well made trailer has the opportunity to widespread to all movie sites and social media, no matter who produced it (Baski, 2010).

While lacking the instant availability and intimacy that the internet provides, movie theatres operate with their biggest advantage, which is the setting and atmosphere, where the consumers are allured into the best possible attitude to receive advertising, without most common outer

distractions that could stain the experience. Movie goers are generally allowed to enter the theatre half an hour prior to the start of the movie, during which they are shown local advertisement and short commercials, then usually approx. five trailers (taking up 10-15 minutes) before the start, which all contribute to their cinematic experience as an entertaining pre-show.

5. Effects of movie trailers on consumer expectations

While consumer reaction is a process that normally follows the consumption of a good or service, anticipation may be generated in advance to the release with the aid of promotional hype, media coverage and public discussion. The various movie trailers, promising pleasure, spectacle and imagination may give the opportunity for numerous people to form and express their own hopes, expectations and anxieties. All of this may lead to movies be partially interpreted, appreciated and hyped up way before they are even released (Gray, 2008). These pre-viewing activities are especially dominant for highly anticipated movie "franchises" (movies that are interconnected by the same lore, share the same source material or are sequels to one another), with their own dedicated fans (Hills, 2002). These fans appear as the vanguards to all concurrent consumers, showcasing motivations and behaviors that are steadily becoming mainstream, with some more serious fans often developing loyalty to their preferred franchises (Green & Jenkins, 2011). As Davis, Michelle, Hardy and Hight (2014) notes, this loyalty is based on their high regards of the franchises, using them as benchmarks to evaluate any new addition, whether it is worthy of joining the existing canon or not. With the aforementioned movie sites blogs and forums these members of the community are the ones that will step up as opinion leaders, further creating content and word of mouth social media buzz, dissecting each new content (in this case, trailers) for hidden clues and information.

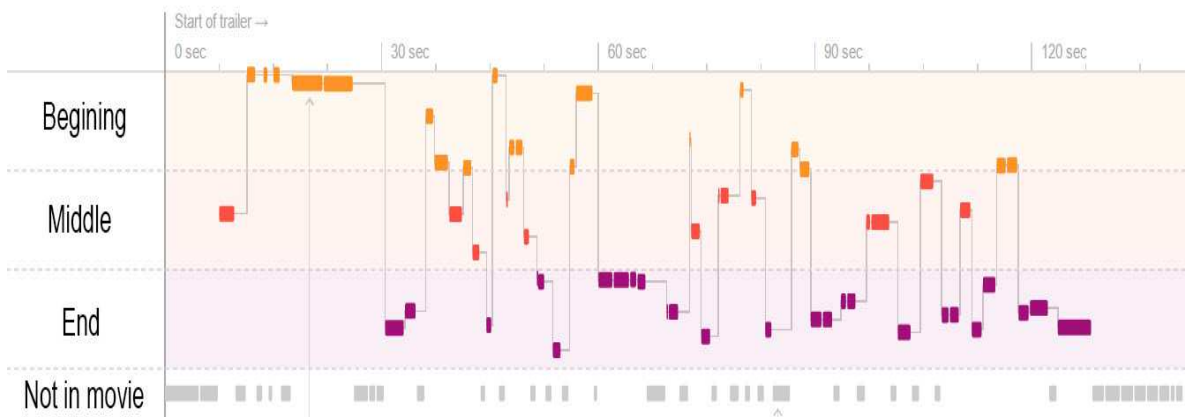
All the while the narrative and tone of the particular movie have little restriction on the creative freedom of the trailer producing companies. During editing they are able to cut the needed segments to cater to the client's (in this case the studio) needs, which may or may not represent the true nature and structure of the original work. As they are not required to mind the time and space integrity of the movie, they are free to create new contexts in their montages, add or change meanings to scenes/shots (possibly turning an ordinary look into an important glance), place otherwise separate lines in the same dialogues. With these techniques and the tweaks to timelines they can suggest conflicts that may not even exist, make effects seem like causes and turn causes into effects (Baski, 2010). These possibilities give even more precise opportunities to the clients to reach their target audiences, like control over the general tone of the trailer (as it is not enough to be a horror movie, but it also needs to look like one in its trailer presentation), the choice to shift the focus on the leading actors and actresses star power or the plot of the movie etc. (famously for *Signs* 34 different trailer versions were made until they found the right balance of horror and comedic scenes (for male audiences) mixed with family and actor Mel Gibson centric ones (aimed for female audiences)) (Baski, 2010).

In their work Bostock, Carter and Cox (2013) demonstrated on a small number of academy nominated movies how liberal they were in their choices of trailer materials, that they choose according to their genres. On Figure 1 we can see the standard rundown of trailers on the example of *Silver Linings Playbook*, which mostly followed the order of the movie in its presentation, with a handful of shots not present in the final film (mostly alternate camera angles).

Figure 1: Silver Linings Playbook trailer montage

Source: <http://www.nytimes.com/interactive/2013/02/19/movies/awardsseason/oscar-trailers.html>

All the while Figure 2 shows a much more hectic use of the original footages, more in the style of teaser trailers where the scenes shown are not at all chronological (with the seemingly increased number of not in movie footage being mostly long blackouts, with the goal to help with the progression of the trailer).

Figure 2: Lincoln trailer montage

Source: <http://www.nytimes.com/interactive/2013/02/19/movies/awardsseason/oscar-trailers.html>

While it is a common understanding that advertisement does not always cover all aspects of its subject, still movie goers still get fazed from time to time by not getting what the trailers promised to them. The potential disappointment comes from the misinterpretation of these videos, as the concept of free sample is too widely adopted (Vollans, 2014). Their true purpose however is rather to position the movie and persuade the target consumers into action. Sometimes trailers also have to reposition, as sometimes the test views show bad results on certain aspects of the plot, like to tone down the tragedy plotline in a dramedy movie to focus more on the comedic aspects. This reorganisation of the films narrative is done to serve its economic role, but it is also a creative action (Johnston, 2009). While they do not wish to fully mislead the audience, heavy persuasion, shifting expectations and small scale manipulation are all essential parts of creating trailers, which creates many risks and side effects for the consuming audience (Baski, 2010). One of these risks is the potential of spoilers, the less certain a studio is about the success of a movie the more they want to reveal in the trailer, as Kernan (2004) noted among the most common criticisms were that trailers "give away too much of the movie" as well as "all the best jokes are in the trailer". Another is the aforementioned creative

use of footage as well as scenes not included in the final movie, as thanks to YouTube and the like the consumers may not only see trailers of upcoming movies but also past releases' trailers are available to compare as well, which aids to expose all the small shifts and false promises. In his work, Vollins (2014) presented several widely documented incidents where trailers being perceived to mislead, like an instance of lawsuit on the trailer of *Drive*, or the case of *Jack Reacher* where the studio was forced to refund the movie goer on his claims of the trailer depicting scenes missing from the final movie.

Another possibly damaging aspect is the way studios manage the viewer expectations, as other viewpoints cited by Kernan (2004) note "They're better than the films." "They only show the spectacular parts." "They lie." "They're the best part of going to the movies." "They're too loud." Indeed, if the trailer has promised a comedy but the movie is actually a drama, audience members might be so disappointed that they might even not acknowledge that the movie is otherwise good and stands its ground in its actual genre.

6. Conclusion

A special sort of duality is hinted throughout the various aspects of movie trailers. This started from the point of their creation, with carrying both the characteristics of representing the movie in a shorter form (under the sentiment of offering a free preview sample) and to be persuasive in their nature (as their main goal is to get consumers to purchase movie tickets); Being a form of advertisement, yet still being actively sought by the consumers (a treat which with the hard exception of the rightfully famous Super Bowl advertisement spots is not shared by many); Mainly trying to convince audiences to watch movies in movie theatres, yet reach the most success on screens of home computers; Trying constantly to raise consumer expectations, yet not overly raise them.

What is clear is that movie trailers seem to be undisputed in their flagship status to the communication campaigns of movies. It is also noteworthy that true to their ever changing nature, the newest trends show that in some cases even regular trailers get their own mini teaser spots of 5 second shorts right before regular 2:30 trailers, as if the production companies were trying to convince viewers not to change channel. An interesting implication of the over-reliance on trailers to market the movies is the studios being somewhat forced into having several set piece sequences (especially in the case of blockbuster movies). As movies and the competition between studios have grown to be more and more spectacle based, these marketable (and trailer compatible) moments in their movies with little regard if they make any sense plotwise (Huber, 2014). Ultimately some of these scenes might end up on cutting floor and their absence may or may not be noticed by the movie audiences, with the former case rightfully generating sour taste for many.

The paper was limited as it had no primary research. Future studies should also consider to examine in particular how much consumers differentiate between the different types of trailers and whether (and for what reasons) they favor any particular type to the rest. It might also be of interest to look into the general timeframes between watching a trailer and the movie it promoted and how the expectations might correlate in their detail and strength to the amount the trailer has revealed and how much time has passed between the two viewings.

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Consumer Behavior in Azerbaijan during the recession

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Abstract

It is impossible to find general pattern for consumer behavior of people from different cultures in different economic situation. Actual purchase and usage of products in various fields is increasing each year. However, purchase intention depending on different kind of internal and external variables. Not only CPI (Consumer Price Index) but also Total Income and growth rate of GDP is very important in analyzing of consumer behavior. Azerbaijan is one of the rapidly developing countries in the world. Decreasing oil prices and exchange rate of national currency can also influence to the decision of consumers in Azerbaijan. This paper aims to examine the behavior of consumers during changes in economic situation in Azerbaijan and how this macroeconomic situation influence to buying intention of consumers. Results shows that total and disposable income decreased and customers try mostly save money.

Keywords: Consumer Behaviour, Recession in Azerbaijan, Consumer Behaviour in Recession

JEL code: E21

1. Introduction

There are huge number of literature on consumer behavior. Nevertheless information about consumer behavior in a downturn is limited. As we know consumer behavior involve more than buying decision.

Consumer behaviour is the study of when, why, how, and where people do or do not buy a product. It blends elements from psychology, sociology, social anthropology and economics. Understanding consumer behavior enables marketers and other organizations to provide tools for more informed decision-making. For example, research indicates that we better understand the differences among brands when we can view a chart, matrix, or grid comparing brands and their attributes.(Bettman 1979) It attempts to understand the buyer decision making process, both individually and in groups. It studies characteristics of individual consumers such as demographics and behavioural variables in an attempt to understand people's wants. It also tries to assess influences on the consumer from groups such as family, friends, reference groups, and society in general. Consumer behaviour is the sum of people's behaviour that consumer based on income and access to goods and conduct operations in order to meet their own material and cultural needs during everyday life. Also, when making a purchase, consumers consider how much they must pay in relation to the price of other relevant brands or to the price they previously paid for that product, so marketers must be aware of these reference prices. (Howard and Kerin 2006) When buying multiple units of a service for one bundled price (such as a multiday ski pass), consumers may not feel a great loss if they use only some of the units because they have difficulty assigning value to each unit. In addition, when consumers buy multiple products for one bundled price (such as a case of wine), they are likely to increase their consumption because unit costs seem low.(Soman and Gourville 2001)

Consumer behavior reflects the totality of consumers' decisions with respect to the acquisition, consumption, and disposition of goods, services, activities, experiences, people, and ideas by

(human) decision-making units [over time].(Jacoby 1976) How much they decide to spend may be influenced by their perceptions of how much they recall spending in the past.(Srivastava and Raghubir 2002) And consumer behavior research helps government officials understand and try to improve consumer welfare.(Chakravarti 2006) But in a downturn decision making is more different than in economic growth. According to research, how much consumers will pay can even be affected by the price of unrelated products they happen to see first. Thus, the price you would be willing to pay for a T-shirt may vary, depending on whether the prices you noticed for shoes in the store next door were high or low. (Nayakankuppam and Mishra 2005)

Consumer Behavior and downturn

In a recession such segmentations may be less relevant than a psychological segmentation that takes into consideration consumers' emotional reactions to the economic environment.

Customers as divide into four groups:

The *slam-on-the-brakes* is the group of people which is defenceless and mostly influenced by recession. In this situation people try decrease all spending by eliminating, postponing, decreasing, or substituting purchases. Mainly this is group of lower-income consumers typically fall into this segment, but some under some conditions (health or income issues) anxious higher-income consumers can fall to the group.

Pained-but-patient is the group of consumers which is "resilient and optimistic about the long term"(Quelch and Jocz 2009). But they are less sure about the prospects for recovery in near future. As first group they try to waste less amount of money but not such aggressive as the first group. It is the largest segment includes biggest part of households. Depending on situation pained-but-patient consumers increasingly can fall into the slam-on-the-brakes.

Comfortably well-off consumers feel secure about their ability to ride out current and future bumps in the economy. They consume at near-prerecession levels, though now they tend to be a little more selective (and less conspicuous) about their purchases. The segment consists primarily of people in the top 5% income bracket. It also includes those who are less wealthy but feel confident about the stability of their finances—the comfortably retired, for example, or investors who got out of the market early or had their money in low-risk investments such as CDs.

Comfortably well-off group is not so worry about future difficulties in economy. They consume little bit less and sometimes may be more selective. This is people with high income and consumption opportunities.

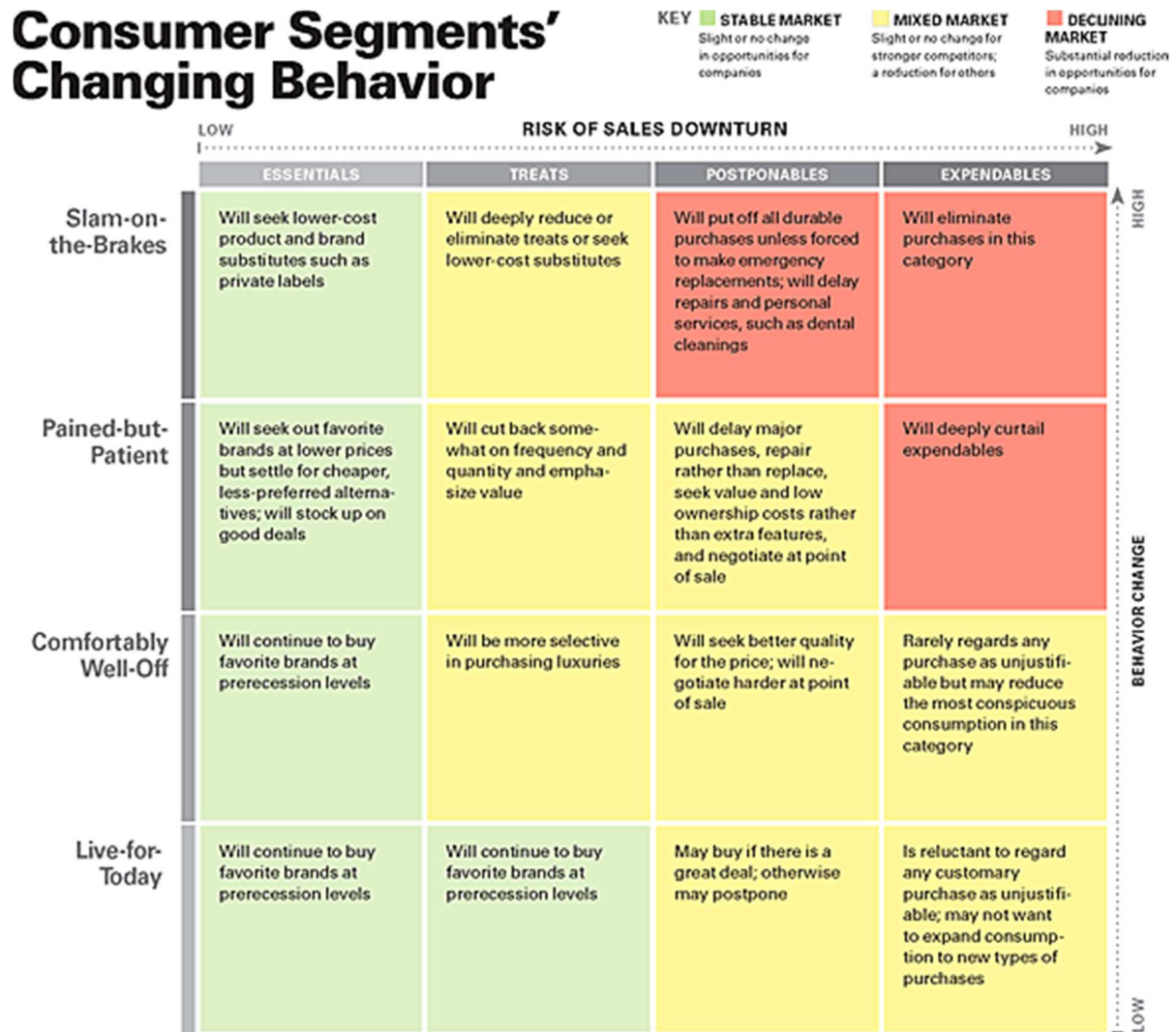
The *live-for-today* group consist mainly young peoples which is unconcerned about saving and money issues. It is interesting that, this group extend purchases during the recession. Consumption behavior changes only if person lost job.

All consumers prioritize consumption and sort it into four categories:

- *Essentials* are the products/services necessary for life.
- *Treats* are when purchase is accepted justifiable.
- *Postponables* are items whose purchase can be postponed.
- *Expendables* are considered as "unnecessary or unjustifiable". (Quelch and Jocz 2009)

We have to note that, food, clothing and shelter must be considered as basic level, but transport and medical services should add to this category. But all other categories of products/services can be discussed.

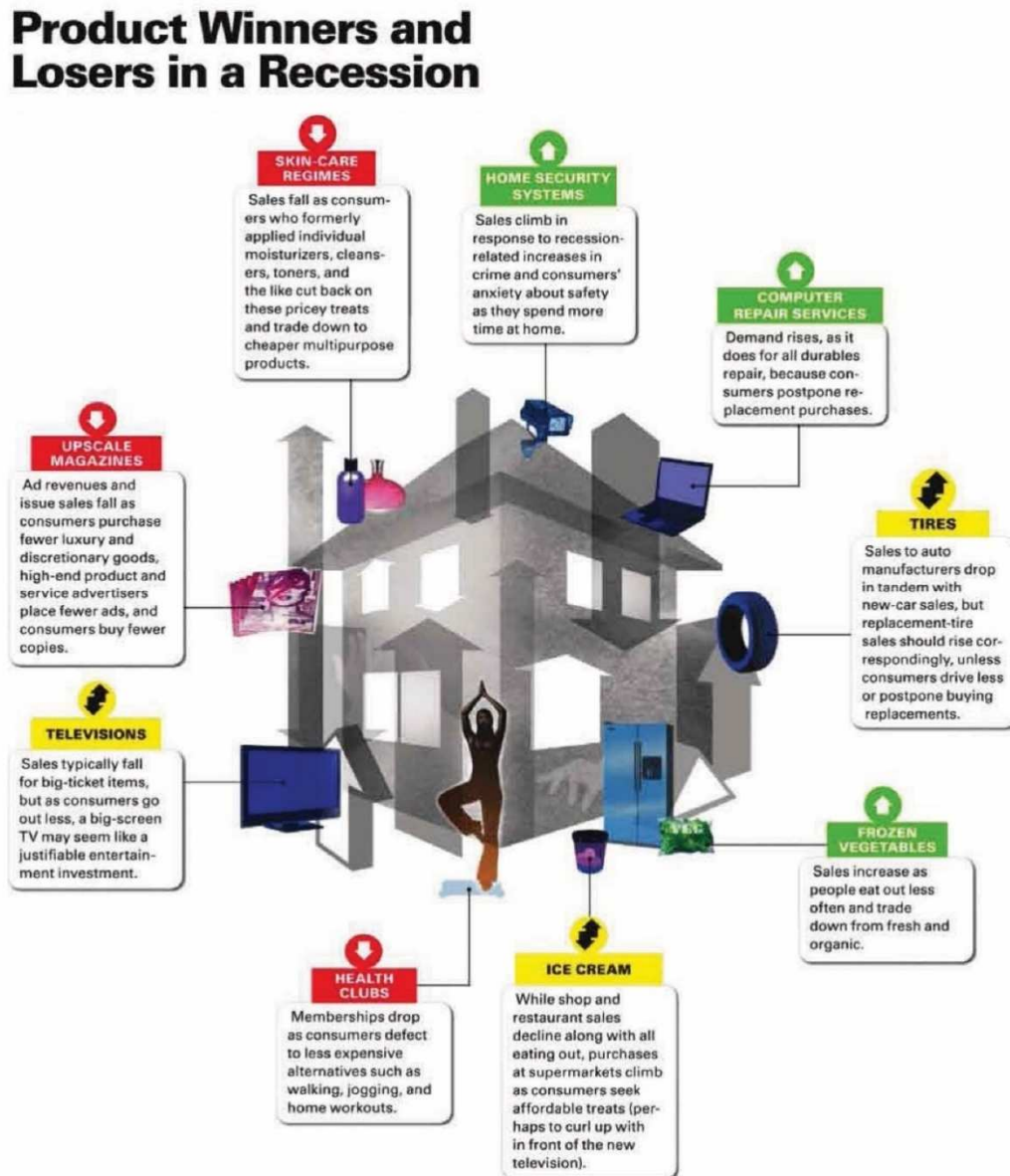
Figure 1: Consumer Segments' Changing Behavior



Source: Quelch and Jocz, 2009

In a downturn, mainly consumers review their consumption decisions. (except live-for-today) It is also accepted that, in recession a lot of products and services move from essentials to other segments. In this period price has more weight in the final decision of customers and it influences the brand loyalty of consumers. Product winners are repair and security systems and the main idea of consumers is repair and reuse some products and protect houses. But luxury products/services mainly

Figure 2: Product winners and losers in Recession



Source: Quelch and Jocz, 2009

Consumer Behavior in Azerbaijan

Azerbaijan proclaimed its independence in 1991. About three years country was at war with Armenia. The collapse of the USSR and war with Armenia have a negative impact on Azerbaijan economy. Situation after independence allow us to divide independent period into two main parts.

1. 1991-1995 war with Armenia, economic chaos and regression
2. From 1996 macroeconomic stability and economic development

As the result of forward-looking policy and vigorous activities, results in socio-economic development and integration into the world economic system were achieved within a short period.

In the mid of 1990th economic reconstruction began within oil contracts and development of infrastructure. Main oil agreement for Azerbaijan “Contract of the Century” signed between government and leading oil companies of the world in September 1994. In 1996, Azerbaijan consented to an arrangement permitted its oil trades through Baku-Novorossiysk pipeline. In 1999, the new pipeline Baku-Supsa put into utilization; furthermore, a concurrence on development of Baku-Tbilisi-Ceyhan, which is as of now the significant oil trading pipeline. The main economic driver is oil exports through the pipelines. Otherwise, completion of Southern Gas Corridor is geopolitically important for Azerbaijan in the case of revenue from gas export. However, nowadays government try to develop economy without impact of oil export.

In the last decade, Azerbaijan went through two economic crises.

1. **First crisis** of 2007-2008 years, which called global financial crisis and Azerbaijan got out from this crisis successfully.
2. **Second crisis** began in February 2015; national currency lost 25.7% of its value. Second devaluation happened in the end of December 2015 when Central Bank of Azerbaijan switch national currency to free float and as the result, 32.3 % drop in the value of AZN and it made AZN the worst performing currency of the year.²¹ The reason of second crisis is huge dependency of economy in oil export and decreased oil prices has led to the country's current economic problems and the currency devaluations in 2015 and 2016 years.

2. Methodology

The paper is structured as follows. Information of Statistic Committee about Annual GDP and growth rate, Disposable Income ,Total Income and CPI collected and analized. Moreover, we try to explain importance of Consumer Behavior and show it as one of the indicators of economic welfare for Azerbaijan. Most part of literature of the research relates to the hard and soft copy of articles, reports related to Azerbaijan Government. The paper proves recession in Azerbaijan by using the secondary data. Theoretical Background taken from reports, publications and articles about Consumer Behavior. Significant resources taken from official sites and reports of Statistic Committeeand Central Bank.

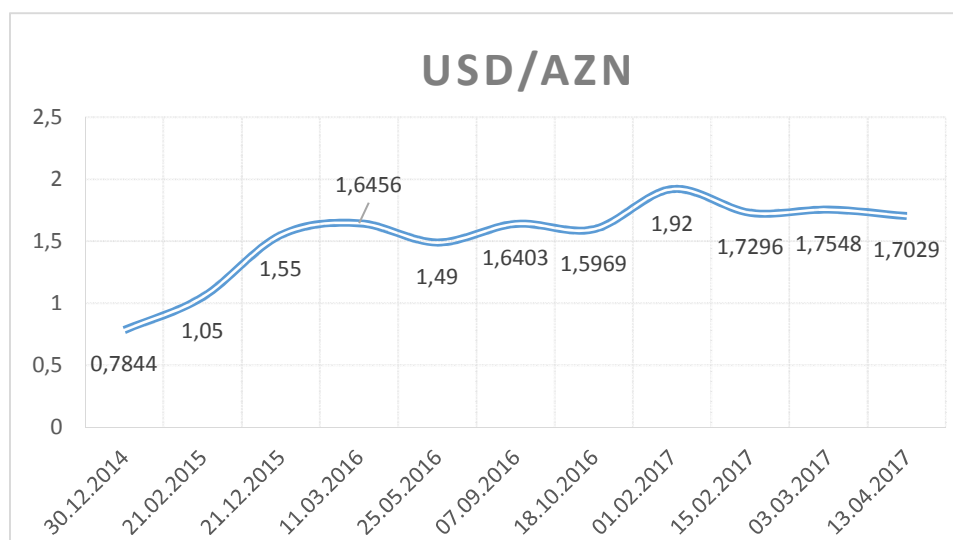
3. Results and Discussion

3.1 Annual GDP and Disposable income as indicators of consumer behavior in Azerbaijan

After proclaiming independence government try to decrease dependence on oil export in economy as much as possible. Many plants were built by government support in some fields of economy and government programs for development of various sectors of economy. Results can be seen in unemployment rate, economic stability infrastructural projects etc. Despite, oil export plays main role and decreasing oil prices influence whole economy.

As the result of several devaluations beginning from February 2015 (Fig. 3) price of exported goods increased two-fold. Azerbaijan is not a big country, so even for producing some goods; we buy some raw materials from abroad. Therefore, some producers, which produced goods within a country, also should increase prices. From other side, government is the main contractor in Azerbaijan and business mainly in business-to-business field earn money from government supported projects. Income from petrol export decreased and as a result, spending on different projects is also dropped.

²¹<https://www.bloomberg.com/news/articles/2015-12-31/here-are-the-best-and-worst-performing-assets-of-2015>

Figure 3: USD/AZN

Source: The Central Bank of the Republic of Azerbaijan, 2017

GDP is an important indicator of a country's economic power. Gross domestic product (GDP) denotes the aggregate value of all services and goods produced within a country in any given year. GDP includes all private and public consumption, government outlays, investments and exports minus imports that occur within a defined territory. Simply, GDP is a broad measurement of a nation's overall economic activity. Figure.1 also shows us annual GDP and disposable income declined after 2014. But we should consider that, during all this period value of national currency impaired 2 times. Exchange rate of national AZN was 0.78 AZN for one USD. However, after the second devaluation it became 1.55 AZN for one USD.

It is also interesting to look through annual GDP growth rate. As we know, The GDP growth rate is the most important indicator of economic health. When the economy is expanding, the GDP growth rate is positive. If it's growing, so will business, jobs and personal income.

If it's slowing down, then businesses will hold off investing in new purchases and hiring new employees and will wait to see if the economy will improve. Therefore, it can easily depress the economy and consumers have less money to spend on purchases. If the GDP growth rate turns negative, then the country's economy is heading towards or is already in a recession. That's when the economy contracts, and GDP is less than the quarter or year before. Figure.2 shows that in the shown period, percentage of total income fluctuated and indicator began to increase slightly from 2014. But according to calculations, growth means only changes in exchange rates. International trade currency is USD and devaluation shows us such kind of increase.

Consumer Price Index compare prices of base year (Azerbaijan Statistic Committee used last year prices as base year) with a current year and as we realize, price of all products increased. As a result, consumer price index grows slightly over the shown period. Changes for CPI of food, beverage and tobacco, and non-food products follow the same logic. Real situation can be seen only by the growth rate of GDP (relatively to previous year). All the facts prove us that economy of Azerbaijan is in a downturn.

“Generally we consider ‘net’ or ‘disposable’ household income which is derived by aggregating all income sources over all the individuals within each household, after the deduction of payments of direct taxes.” (Jenkins, Brandolini et al. 2012) But also disposable income gives

us more information about consumers and current situation. “Purchases depend on consumers’ having disposable income feeling confident about their future, trusting in business and the economy and embracing lifestyles and values that encourage consumption.” (Quelch and Jocz 2009) It means that if disposable income is going down, consumers become more selective about their consumption decisions. Fig. 5 shows that after 2008 disposable income in Azerbaijan went down and it stabilizes during 2015-2016 years.

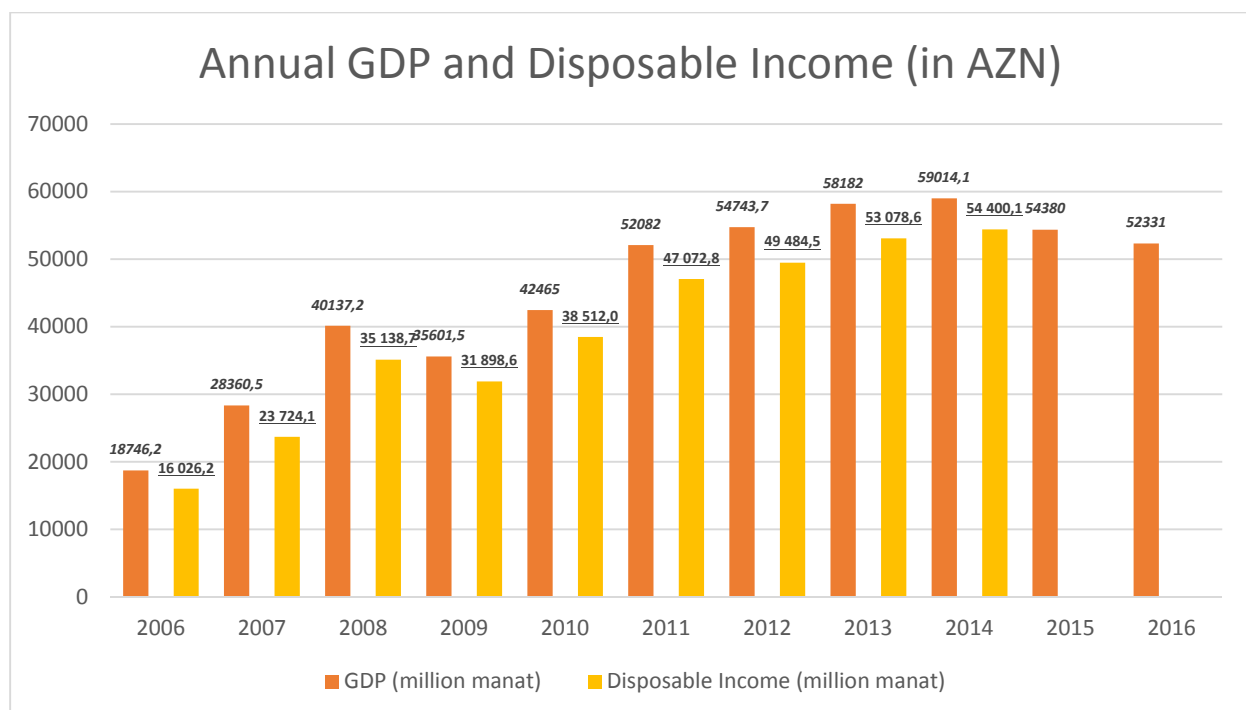
4. Conclusion

As we know downturn in Azerbaijan began with devaluation of national currency, then it influenced other sectors of economy. It means that bank and financial sector was firstly influenced. Most of bank actives was in national currency and value of currency decreased about two-fold. (Fig. 3) From the other side, banks had no actives for loans and it automatically showed negative impact in business sector. Executives were not able to get a loan, at the same time, government as the biggest contractor in country decreased outlays. I should note that during the last 2 years (from the beginning of first devaluation) 9 banks out of 44 were closed.

Government try to encourage executives to import their products abroad. It means that we should decrease the importance of oil export and support other fields of economy. It is important to support regional development and grow up tourism and other sectors.

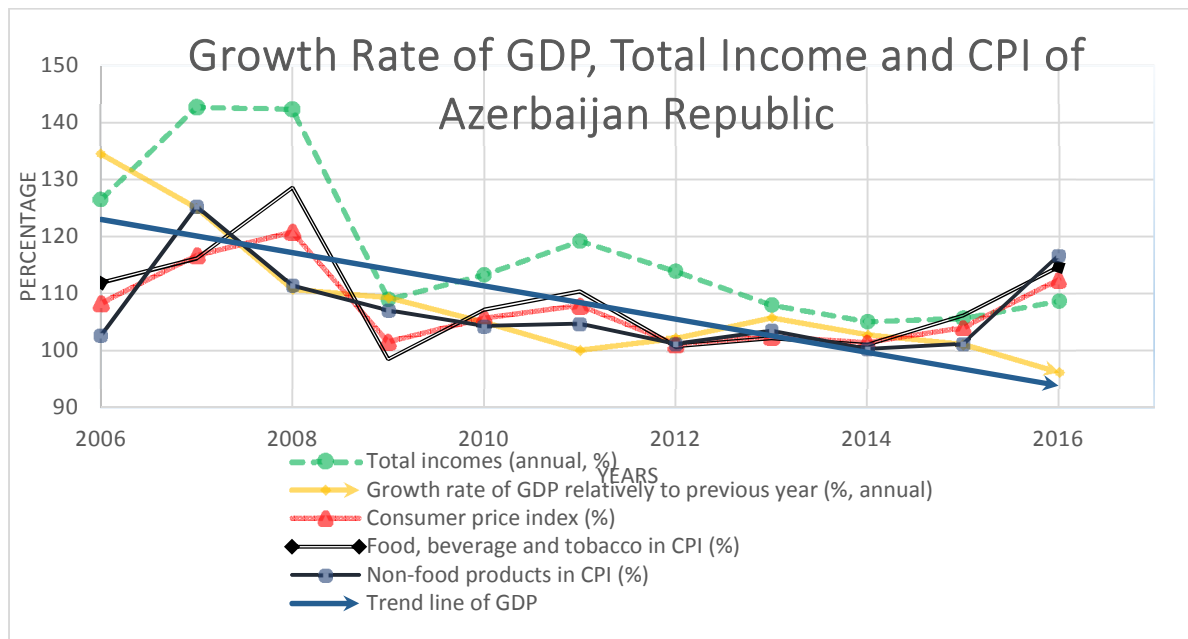
Consumers in recession want to save more money by changing their preferences. They prefer to clean house to cook meal by themselves. During this period, consumers’ brand loyalty was damaged even they used to follow usual trends. In Azerbaijan, for example, it means that consumers try to buy mostly local products.

Figure 4: Annual GDP and Disposable Income (in AZN)



Source : The Statistic Committee of Azerbaijan Republic

Figure 5: Growth Rate of GDP, Total Income and CPI of Azerbaijan Republic



Source : The Statistic Committee of Azerbaijan Republic

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Current Practices and Future Development of Strategic Marketing Communication in Europe

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Abstract

Current practices and future development of strategic marketing communication in Europe is based on the most important strategic issues for communication management. Based on the results of research of the largest transnational study on strategic communication with 2,710 participating communication professionals from 43 European countries European Communication Monitor and leading global content marketing education and training organization Content Marketing Institute, can be concluded that professionals in marketing communication within Europe give a huge importance to linking business strategy and communication. Paper also points at results of changing relevance of key communication channels and instruments during the last 10 years (2007-2016), as well as the predictions of the most important strategic issues for communication management until 2019. According to professionals, the most important role in marketing communication, nowadays it is face to face communication, online communication and using of social media. Results proved that LinkedIn is the platform that the majority of European B2B marketers consider to be the most effective. On the other side, professionals in Slovak Republic prefer using Facebook as the main Social media platform in reaching target audience.

Keywords: Strategic Marketing Communication, Communication Channels, Social Networks.

JEL Classification: M 300, M310, M 390.

1. Introduction

The strategic marketing communication refers to the means adopted by the companies to convey messages about the products and the brands they sell, either directly or indirectly to the customers with the intention to persuade them to purchase. The marketer uses the tools of marketing communication to create the brand awareness among the potential customers, which means some image of the brand gets created in their minds that help them to make the purchase decision (Nagyová et al. 2014).

Strategic marketing communication tackles an area for developing the brand awareness, which means that consumers translate product information into perceptions about the product's attributes and its position within the larger market (Pelsmacker, 2007).

Businesses also use marketing communication to retain the product's current customer base, and to cement relationships with customers and suppliers, notes "Reference for Business." Marketing communication strategy defines the business's plan for product information dissemination and brand awareness development (Greene, 2017).

There is often claimed the role of strategic marketing communication as essential to the long-term strategic viability of the businesses. Strategic communications is actually the company's competitive advantage. (Holienčinová et al., 2014)

Generally considering strategic marketing communication, great choice of the communication tools and messages requires that all activities are coordinated. Timing of reports is also important in relation to the availability of goods (Šugrová et al., 2016).

Demands for coordination are higher when marketing communication is implemented by the external company. Coordination must be entrusted to a particular department and a specific manager (Kubeláková, 2015). It is necessary to develop a comprehensive marketing communication project with specific responsibilities and assigned scope of the various communication tools. Communication activities and their timing must be coordinated in its entirety (Horská, 2009).

Particular attention should be given to the introduction of new products on the market and large communication campaign. The responsible manager of marketing strategies coordinates and directs all activities in order to implement a comprehensive marketing communications strategy (Nagyová et al., 2014).

The essence of the strategy focus is to present how the company and its products help customers to solve their problems (Kotler et al., 2007).

Social networks take an important part in strategic marketing communication worldwide. Nowadays, professionals use communications via social networks more than ever before. Social media networks are a major resource for both small and big businesses that are looking to promote their brands on the internet. However, just because the business needs to be on these platforms doesn't mean that it has to be on every other social media site. To properly utilize the power of social media professionals need to know the most popular social media platforms and identify the ones that work best for the business (Hesková, 2001).

2. Data and Methods

The underlying data for paper have been drawn from the available literature sources, professional publications, websites engaged in the exploration and analysis of strategic marketing communication and its implication for practice. Statistical data were obtained from the survey European Communication Monitor 2016 by the Association of Directors of Communication (EACD) and survey by Content Marketing Institute.

The European Communication Monitor is the largest transnational study on strategic communication with 2,710 participating communication professionals from 43 European countries (Table 1). Content Marketing Institute is the leading global content marketing education and training organization, teaching enterprise brands how to attract and retain customers through compelling and multi-channel storytelling. The survey summarizes the results of changing relevance of key communication channels and instruments during the last 10 years (2007-2016), as well as the predictions of the most important strategic issues for communication management until 2019.

This is completed by the final view on the professionals using Social Media and chart of the most effective social media platforms. Using social media results were compared with situation among professionals from Slovak Republic. This research was conducted online in year 2016, target group were marketers B2B and PR professionals.

The statistical package for Social Sciences was used for data analysis. Cluster analysis were used for classifying subjects.

3. Results and Discussion

Survey took place in 34 European countries which were split into 4 regions (Table 1).

Table 1: Respondents from 34 European Countries

Northern Europe 30.0% (n = 812)	Western Europe 29.6% (n = 802)	Eastern Europe 13.5% (n = 365)	Southern Europe 27.0% (n = 731)
Denmark Estonia Finland Iceland Ireland Latvia Lithuania Norway Sweden United Kingdom	Austria Belgium France Germany Liechtenstein Luxembourg Netherlands Switzerland	Armenia Belarus Bulgaria Czech Republic Georgia Hungary Poland Romania Russia Slovakia Ukraine	Albania Bosnia and Herzegovina Croatia Cyprus Greece Italy Macedonia Malta Montenegro Portugal Serbia Slovenia Spain Turkey

Source: Zerfass et al. 2016, European Communication Monitor

Total 812 professional from Northern Europe, 802 professionals from Western Europe, 365 ones from Eastern Europe and 731 ones from Southern Europe picked those three issues which they believe will be the most important for Public Relations or Communication Management within the next three years. Percentages frequency is based on selection as TOP 3 –issue(Figure 1). The most important is linking business strategy and communication (42 percent), dealing with the speed and volume of information flow (38 percent) and coping with the digital evolution and the social web (36.8 percent). Interesting fact is that using big data and algorithms for communication was signed as the strategic issue for Communication management only by 23.4 percent of professionals within the survey.

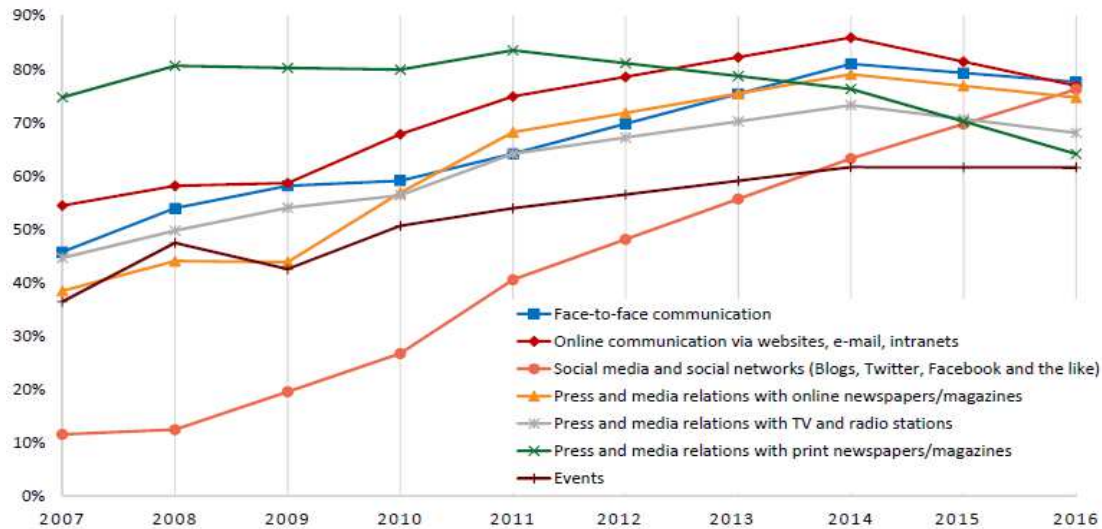
Figure 1: The Most Important Strategic Issues for Communication Management until 2019


Source: Zerfass et al. 2016, European Communication Monitor

As the next point the same professionals marked how important are according to them: Face-to-Face communication, Online communication via websites, e-mails and intranets, Social media and Social networks Press and media relations with online newspapers magazines, Press and media relations with TV and radio stations, Press and media relations with print newspapers/ magazines and Events (Figure 2). Percentages frequency is based on the scale

points. The relevance of above mentioned key communication channels and instruments has been changing over the past 10 years- as in 2007 it were press and media relations that played the most important role in marketing communication, nowadays it is face to face communication, online communication and using of social media.

Figure 2: Changing Relevance of Key Communication Channels and Instruments During the last 10 years (2007-2016)

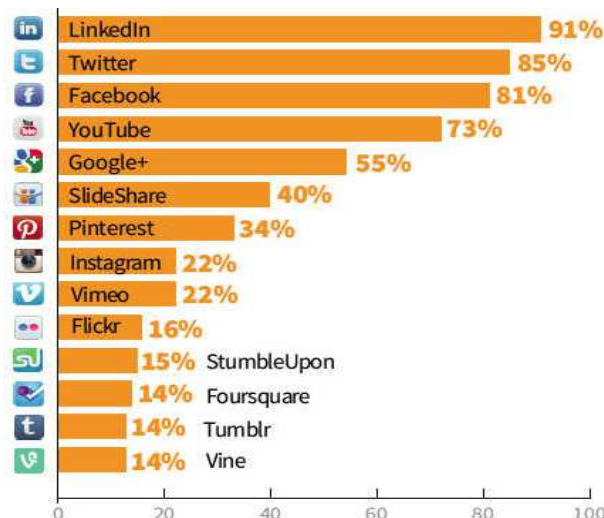


Source: Zerfass et al. 2016, European Communication Monitor

Professionals are using all social media platforms (Figure 3) to distribute content more frequently than they have done ever before. The social media platforms that have experienced the biggest surges in use, year over year, are SlideShare (40 percent), Google+ (55 percent), and Instagram (22 percent).

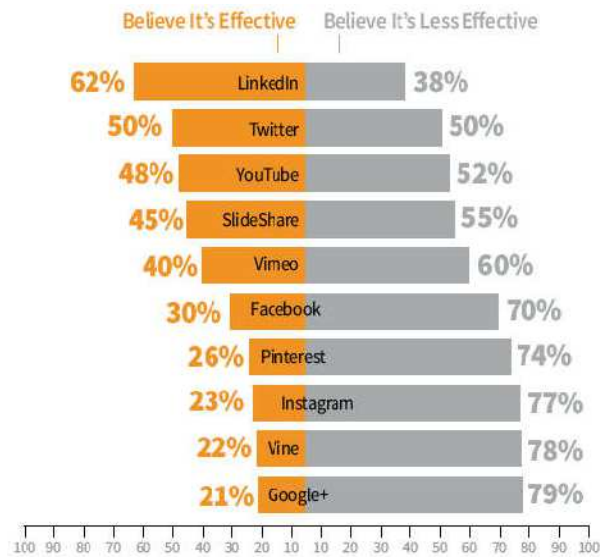
Marketers were asked to rate the effectiveness of social media platforms. As can be seen on Figure 4, there is uncertainty in terms of social media effectiveness. Although Social media influence is rising, LinkedIn is the only platform that the majority of European B2B marketers consider to be effective.

Figure 3: Percentage of European Marketing Professionals using Social Media Sites



Source: B2B Content Marketing Trends. Marketing Profs.

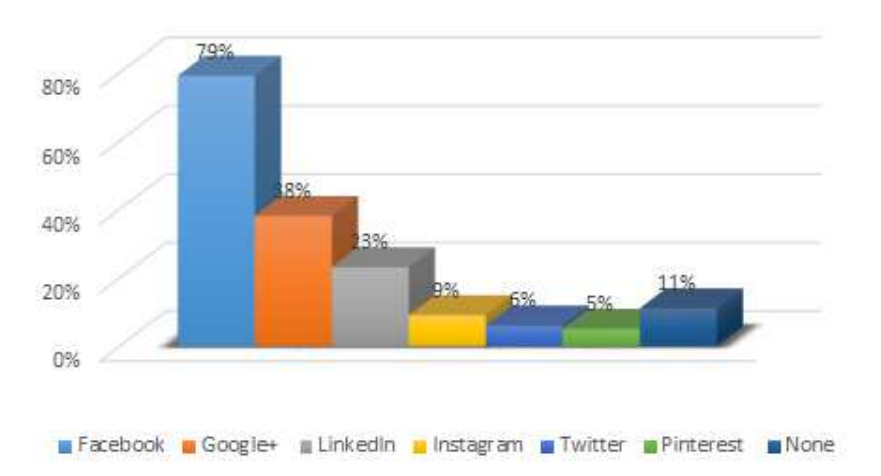
Figure 4: Effectiveness Ratings of Social Media Platforms among European Professionals



Source: B2B Content Marketing Trends. Marketing Profs.

Following the above mentioned survey, research about Slovak marketing professionals using Social Media Sites took place in Slovak Republic. Results of Slovak survey differs significantly from a European survey (Figure 5).

Figure 5: Percentage of Slovak Marketing Professionals using Social Media Sites



Source: own research

As can be seen in Figure 5, the most of Slovak marketing professionals use on a daily basis mostly Facebook (79 percent) and Google+(38 percent). LinkedIn is used just by 23 percent of Slovak marketing professionals, which is, in comparison with European professionals, too low number.

4. Conclusion

Total 2,710 participating communication professionals from 43 European countries within European Communication Monitor picked those three issues which they believe will be the most important for Public Relations or Communication Management within the next three years. According to them, the most important is linking business strategy and communication (42 percent), dealing with the speed and volume of information flow (38 percent) and coping

with the digital evolution and the social web (36.8 percent). The same professionals marked that the relevance of key communication channels and instruments has been changing over the past 10 years- as in 2007 it were press and media relations that played the most important role in marketing communication, nowadays it is face to face communication, online communication and using of social media.

According results by Content Marketing Institute, professionals are using all social media platforms to distribute content more frequently than they have done ever before. The social media platforms that have experienced the biggest surges in use, year over year, are SlideShare (40 percent), Google+ (55 percent), and Instagram (22 percent). And although Social media influence is rising, LinkedIn is the only platform that the majority of European B2B marketers consider to be effective.

Based on Slovak research, the most of Slovak marketing professionals use on a daily basis mostly Facebook(79 percent) and Google+(38 percent). LinkedIn is used just by 23 percent of Slovak marketing professionals, which is, in comparison with European professionals, too low number.

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Global consumer culture – the case of Polish young female consumers

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Abstract

Modern globalized consumer culture is widely present in the mass media and influences the consumer culture in Poland. Young, educated women living in the cities are one of the most modern consumer groups, prone to the new consumer trends and innovativeness. They are active participants and creators of consumer culture in Poland. The article presents the problem of global consumer culture, characteristic of young female group of consumers as well as young female consumption. Young consumers try to adopt new consumer behaviour patterns, yet, in part still appreciate traditional consumer values. The issues analysed in the paper may be interesting for the producers of goods and services, marketing managers and all interested in the changes in consumer activity and needs.

Keywords: consumer, consumer culture, globalization, women

JEL Classification: D11, D12, M31

1. Introduction

Globalization processes enhance the development of global brands and facilitates the process of cultural diffusion. People around the world may drink the same beverages and wear the same clothing brands. The consumer patterns also spread around the world, arousing similar needs in people of different origins, values and lifestyles. The patterns of consumer behavior are getting unified among people living in different countries and in various cultures (processes of cultural homogeneity).

Zygmunt Bauman devotes a lot of reflection on the state and future of consumer society in the globalized world. He explains that "consumer society is a society that promotes the choice of a consumer lifestyle and lifestyle strategies, encourages or compel to it, plunging all its cultural alternatives into disgrace". (Bauman, 2009: 62)

Qualities such as variation, constant movement, defragmentation and individualism characterize a postmodern culture. Postmodernism is the period of globalism, information, office workers, consumer society, pluralism and the need to make continuous choices. (Antonides & van Raaij, 2003: 325) Technological development typical for postmodern era enables virtual consumption and virtual commerce (Chluski, 2007).

Consumption, among others, fulfills cultural function: it shapes traditions, customs, values, and even aspects of morality. It affects people's behavior, their identity, creating symbols in social communication etc. (Bylok, 2005: 270-271) It is also shaped by the social structure in which occurs. Interesting view on connection between social structure and consumption on different types of goods presents Skolik & Kukowska, (2016).

In the modern globalized world „consumption increasingly becomes the consumption of the code accompanying the consumed goods and services, and becomes a show in which the participation determines the social status of an individual, resulting in the display of the attributes of the role played in the social spectacle " (Wątroba, 2009: 13)

Modern global consumer culture is connected with the penetration of the economic and cultural sphere. Cultural products become commodities for consumption. Moreover, a commercialization of culture takes place. According to M. Featherstone consumer culture refers: "not only to the growing production and distribution of cultural goods as commodities, but also to the ways in which most cultural activities are transformed into the consumption of symbols and images." (Featherstone, 1997: 75)

As C. Campbell points out, the modern form of consumption supports not protestant ethics, but romantic ethics, by focusing on imagination, mysticism, emotionality. With regard to consumption, the goal is not to acquire and use goods because of their utility, but in order to seek pleasure. Modern consumer hedonism is based on the illusory vision of happiness and pleasure. (Campbell, 1987: 89)

G. Ritzer, indicates that the worldwide consumption is inspired by new consumption means, the so-called "temples of consumption", which are the places where widely understood, various consumer activity is possible. They are eg. amusement parks, large shopping centers, sports facilities etc. (Ritzer, 2009: 24-25)

The temples of consumption combine consumption with entertainment, they are places in which people are encouraged to spend as much money as possible (hyper-consumption). It is made possible by more and more available credit systems. Increasingly, new consumption become "a great stage decoration that was designed to lure people" (Ritzer, 2009: 113)

The article presents what kind of global consumer patterns of behaviour are performed by the young female consumers in Poland on the case of the young inhabitants of Częstochowa.

2. Data and Methods

The main problem analysed in this article can be expressed as follows: *to what extent and in what way the modern patterns of consumer behaviour are performed by young women in Poland?* The aim was to determine *what patterns of consumer behaviour performed by young women (based on the example of inhabitants of Częstochowa) represent global cultural and consumer trends.*

The research and results presented in this article have got qualitative value. The method of structured in-depth interviews has been used. The conceptualisation of basic terms such as modern consumer patterns of behaviour has been done. Due to the fact of multidimensionality of the consumption behaviour the research has been focused only on the most significant aspects of modern consumption identified in the literature of the subject by the most known scientists (Z. Bauman, C. Campbell, G. Ritzer, J. Baudrillard, M. Featherstone, M. Douglas, B. Mróz). Proper indicators have been selected and on this basis appropriate questions of the in-depth interview have been made. Most popular modern consumer trends and patterns of behaviour are as follows:

- observing and following the changing fashion trends,
- the need for immediate gratification, the so-called impatience syndrome (instead of deferred consumption),
- the possibility to meet awakened consumer needs even in the case of low income thanks to consumption on credit,
- enjoying the feeling of pleasure derived from consumption (consumer hedonism)
- commercialization of various spheres of human life (every sphere connected with purchasing appropriate goods enabling a given activity),

- aesthetization of human life (focusing more on the aesthetic than on the functional aspect of consumer goods),
- use of large shopping centers (shopping malls), so called “temples of consumption”,
- increased role of the media in human life - the source of patterns of consumption behavior,
- virtualization of consumption (use of the Internet and its resources for consumption, effect ROPO -research online, purchase offline and vice versa),
- wide use of services (servitisation of consumption). (Mróz, 2010; Bauman, 2009; Ritzer 2009; Featherstone, 1997)

The transcribed results have been analysed in order to identify the modern consumer behaviour patterns of respondents and grouped in most common categories of behaviour.

The research has been conducted by means of a structured in-depth interview in order to better understand and clarify the research problem through qualitative research. Structured in-depth interviews with 22 chosen female respondents – inhabitants of Częstochowa have been conducted. Respondents were of age 20-44 years. The cesure of age was chosen in order to research young female consumers. The lower limit of age is the age of relative independence (finishing medium level education and starting to work or starting higher education) and the upper limit was slightly higher than typical 35 years old cesure for young people. Due to getting higher education, the age of setting up a family and entering into adulthood is moving further to the age of 30 and the upper limit of early maturity is moving further as well.

The respondents have been chosen so that they represent different types of female consumers. The respondents included working women as well as women not active professionally, women working in physical work and mental work, mothers and women without children, women with higher income and with lower one, women in relationships and singles, younger and older women (but before the medium age of 44 years).

This qualitative research has been conducted in year 2015 as a part of the PhD dissertation next to the quantitative studies conducted with the survey method. (Karczewska, Bsoul-Kopowska, 2016)

3. Results and Discussion

Spending time on shopping is associated with a woman's occupation, the social role of a woman (Campbell, 2008: 358-359). Generally the interviewed respondents do most of the shopping alone, especially daily household shopping. However, larger purchases or the purchase of more expensive goods are often made together with a partner. They use modern forms of marketing – possess loyalty cards, use promotions, regularly visit megastores, shopping centers and shopping malls.

The Gemius report highlights two interesting phenomena named: ROPO (online research, offline purchase) and reverse effect ROPO (offline research, online purchase). (E-commerce in Poland, 2014: 85) Female consumers, looking for consumer goods, do product recognition, compare it online to save time spent searching in a store or standing in a queue. This does not always mean buying online, because a consumer sometimes do a research on the Internet and buys in a stationary store of a particular brand. Having knowledge about the product or brand may save time usually wasted on reading labels and learning new products, which is time-consuming.

The Internet is also used to find attractive offers and promotions that are usually less attractive in the stationary stores: "I like to plunder in the shops, especially on the Internet, looking for

good opportunities by going to different sites with discounts or lower prices."(a woman, 24 years old, no children, not working, average education, average financial situation).

The Internet also saves you time and money and gives you the added pleasure of receiving a package. The Internet provides a convenient alternative to regular stationary shopping, especially for young mothers:

"I like to buy online. Firstly, you can do such cool research to compare prices in different places, using different price comparison websites, eg Ceneo. In addition, you get your package quite soon, often the next day. So when you have children, sometimes buying online is faster than going to a stationary store. Besides, there is another aspect that the package comes and you can unpack it... And then it is so nice." (a woman, 31 years old, 1 child, working, higher education, average material situation).

The ideology of consumerism claims that the best way to provide human value and happiness is to consume and possess the goods, promises the happiness, development and self-expression of a man through consumption. (Sklair, 2010: 135)

Women were asked if they like shopping. There are several categories of common answers to the question of whether a consumer likes to shop and whether they feel relaxed or obliged while shopping. Some women are very fond of shopping and feel pleasure, relax. Some, however, distinguish between shopping which is fun (most often buying clothes) and those which are obligatory (daily household shopping). One of interlocutors stated: "This (shopping) is a way to relieve some of the everyday stress" (a woman, 28 years old, without children, working, higher education, good financial situation).

More pleasure is drawn from the purchase of non-food goods - clothing, equipment, accessories, etc. In this case the consumers can show more creativity, look for promotions, occasions, search for the novelties (consumer as "trysumer", trying new goods and services).

A respondent describes it in the following way: "It is relaxing, when I have a worse day, I go shopping, buy some nice clothes, that is it, it is total pleasure" (a woman, 20 years old, no children, not working, average education, average material situation). Another consumer points out: "With cosmetics it (shopping) also takes some time because I like to test cosmetics on my hand, try which color, shade (to buy)." (a woman, 25 years, no children, working, higher education, good financial situation).

Women draw pleasure from shopping and it involves a lot of positive emotions connected with an act of buying, especially a good, which a woman wanted to purchase for a certain time. The results of the interview on this matter presents table 1.

Tabel 1: Emotions related to the acquisition of a long-awaited good. Number of women (out of 22) mentioning a given kind of emotion. Results of qualitative research

Great satisfaction, excitement	Joy, contentment, pleasure	Willingness to brag, show off	Relief, frustration
<ul style="list-style-type: none"> Great satisfaction – 2 women Excitation, succesful hunt – 2 women Satisfaction – 5 women 	<ul style="list-style-type: none"> Joy –3 women Joy, but it soon gets – 1 woman Happiness – 1 woman Contentment – 4 women 	<ul style="list-style-type: none"> Willingness to brag – 4 women Willingness to show off, show to other people – 1 woman 	<ul style="list-style-type: none"> Relief that a person finally has got the good – 1 woman Frustration – if a good is too expensive– 1 woman

<ul style="list-style-type: none"> • Dream comes true –1 woman • Euphoria –1 woman 	<ul style="list-style-type: none"> • Great pleasure –2 women 		
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Source: Own research

Consumption enables self-expression, creation of self-identity and adaptation to changes in the modern world as well as communication with others using the symbolic meaning of goods. (Douglas, Isherwood, 2006: 40)

"Why do I like it (shopping)? Well, it makes me happy to be able to buy something cool, and to show myself to someone later (laughter) "(a woman, 24 years old, no children, not working, incomplete higher education, living with parents, good financial situation).

Modern urban flaneur, as described by M. Featherstone: "plays and celebrates the artificiality, randomness and superficiality of fantastic blend of fiction of strange values existing in contemporary fashion and popular city culture." (Featherstone, 1996: 25) Walking around the temples of consumption for pleasure is very popular especially in young consumers group:

When it comes to clothing, it takes a lot of time (to shop). When I am in the shopping mall, I am lost for five hours (laughter). Yes, I like to watch, try on. (Even if you have nothing to buy?) I will always buy something (laughs). I will always buy at least one thing. "(a woman, 25 years old, no children, working, higher education, good financial situation).

Another respondent describes the pleasure of so called window-shopping as follows: "of course yes, I like walking around the shopping mall. I do not know why, but you can see various ... there is a lot of promotion, it happens often that when I go to this store, I have a wide choice, it happens that there is a promotion, then I am even more pleased that I encountered the promotion. And if I hadn't gone, hadn't watch (the shop displays), I would not have know it." (a woman, 20 years old, no children, not working, secondary education, average material situation).

All material goods carry social meanings so they function as communicators in the cultural sphere. In addition, they allow a person to create and maintain social relationships. The world is socially constructed in social interactions (social constructivism). (Douglas & Isherwood, 2006: 40) Consumption helps to build what is individual as well as to confirm the membership in social groups.

"It makes me happy (shopping), I can also go with my friend, she can advise me "(a woman, 20 years old, no children, not working, secondary education, average material situation). "(Shopping is) rather relaxing. Free time only for yourself or for example with your family or in the ladies company, with your mother and your sister "(a woman, 25 years old, 1 child, working, higher education, average material situation).

The servitisation (wide use of services) is not so developed as in typical consumer society. However, a lot of interviewed female consumers consumer some of main types of services, especially those connected with caring for the body. The table 2 shows different kinds of services mentioned by the interlocutors.

Table 2: The use of services. Number of women (out of 22) admitting to consuming a given kind of service. Results of qualitative research

Hairdresser, beautition	Other types of caring for the body	Service for the children	Other	Do not use/ do not pay for service (barter transactions)
<ul style="list-style-type: none"> • Hairdresser - 13 women • Beautition – 7 women 	<ul style="list-style-type: none"> • Manicure, depilation, massage – 2 women 	<ul style="list-style-type: none"> • Pool, karate, artistic works hop – 1 woman • Nanny – 1 woman 	<ul style="list-style-type: none"> • Dressmaker – 1 woman • Courses – 1 woman • Cleaning service – 1 woman • Medical service– 1 woman 	<ul style="list-style-type: none"> • Barter transactions – 1 woman • Do not use – 4 women

Source: Own research

What is more, the statements of the respondents show that they rarely use the credit system, preferring to save money for the purchase of goods than to take them on credit. They search for promotions and sales in order to save money, also on the Internet (eg. price comparison websites). Moreover, they do not use services very often or only in basic spheres (hairdresser, childcare, healthcare). These are more traditional patterns of behavior of young female consumers, which are usually mixed with more modern patterns of consumer behavior.

4. Conclusion

The female consumers in Poland acquire and perform basic new patterns of consumer behavior and share modern consumer values, yet they combine them with some of the traditional consumer behaviors and values. They use consumption as a form communication and they are conscious of this function of consumption. They know that the consumption of goods and services may be an act of stating one's social status and show a consumer's social aspirations. Additionally, the consumers consider consumption activities as an occasion for strengthening of social relationships.

Young female consumers treat consumption as a way to achieve happiness or to improve mood. They try to experience positive emotions through consumer activity. What is more, they use widely the Internet in order to search information about goods, their characteristics, qualities and the way to use them. However, they remain attached to some traditional values such as frugality or saving. In the sphere of consumption they try to get the most for the best price. They do not use credit system very often, they prefer to save money for the purchase. The Internet is used to search attractive promotions or sales. The sphere of services is rather limited to basic consumption needs .

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Preference and perception of products and yoghurts labelled by the private label from the side of young Slovak consumers

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Abstract

Despite the fact that the private labels present a global phenomenon which is still fighting for its market place, there is a big probability, that they will captivate the place, which was previously belonged exclusively by traditional brands. The market with dairy products and especially of yoghurts is not an exception. The present paper deals with the issue of private labels, their quality and preference from the side of Slovak consumers under the age of 30 years. The aim of the present paper was to determine the preferences of products and yoghurts labelled by the private labels, as well as the perception of their quality from the side of young Slovak consumers¹. As the research methods there were used the methods of survey and structured questionnaire (the total number of respondents was 1,264 randomly selected respondents with the age up to 30 years). For a deeper analysis of the obtained results, there were set out six assumptions and nine hypotheses, which were tested with the use of Pearson's chi-square test, Fisher's exact test, Cramer's contingency coefficient and Phi coefficient. The results of the research show, that the situation with the preference and perception of the products and yoghurts labelled by the private label from the side of Slovak consumers with the age under 30 years is pretty good – 35 % of respondents buy the products labelled by the private label for few times in a week, more than 42 % of respondents prefer in their purchase products labelled by the private label, more than 79 % of respondents see the quality of products labelled by the private label as adequate to the price, more than 74 % of respondents buy the yoghurts labelled by the private label and more than 58 % of respondents exactly prefer them before the yoghurts labelled with the traditional brand.

Keywords: private label, yoghurt, preference, young Slovak consumer

JEL Classification: M31, M39

1. Introduction

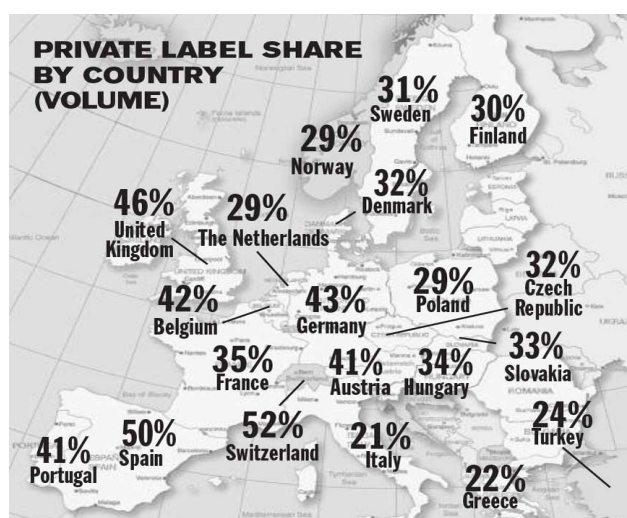
One of the possibilities how to make a loyal customer, is to give him the right product with good quality and a fair price. This, supported by the adequate communication will easily create a strong position for the product on the certain market (Kubicová & Kádeková, 2011; Kretter et al., 2010). The creation of that position costs time and money and producers, but also retailers try to find new ways how to reduce them. This is also why retailers have more interest in products that help them to compete better, either being cheaper or differentiating better (Veraart Research, 2017). One of the ways how to achieve the given aim is to cooperate with an existing producer and to create a so called private label, which in contrast with the traditional label, which is the property of the exact manufacturer, is the property of given retailer (Nagyová & Košičiarová, 2014).

Private labels, also known as retail brands, store brands, national brands or own brands, are nowadays considered to be a global phenomenon (Smith & Bashaw, 2009), which is widespread all over the world. Despite the fact that their history can be dated back to the year 1880, when The Great Atlantic and Pacific Tea Company (A & P) has marketed its own brand of baking

powder (Košíčiarová & Nagyová, 2014), the very beginnings of their development were not as easy – since their beginning, they have been seen only as the "poorer brothers" of branded products and have achieved only very low marketability of shares (Lincoln & Thomassen, 2008). The reason was were simple – they were seen as replicas, which have imitated the leading brands not just in their packaging, but also in the colours and used font types (Kumar & Steenkamp, 2007). This is, why the history of private labels can be divided into three main periods – the period of price competition in the 70th years, which is also named as the era of generic brands; the period of competitive differentiation in 80th years associated with the era of own and exclusive brands, as well as with the era of imitation of branded products; and the period of overall corporate image-building in the 90th years, when to the fore front are becoming the own labels and when to the competitive market of private labels entered also the British market and when there was introduced a special type of organic product lines, as well as various health-promoting products and others (www.gov.mb.ca, 2010; Môciková, 2000).

The strategy of foreign, but also of domestic retail chains is to reach all groups of customers – to satisfy not just the price sensitive customers, but also those who prefer the high quality goods. The mentioned requirements have to be met by the private label products, whose share in Europe, but especially in Slovak Republic, continues to grow – the data compiled for PLMA's 2016 International Private Label Yearbook shows that the market share for retailer brands increased in 13 of the 20 European countries (Figure 1) (plmaininternational.com, 2017).

Figure 1: Private label share by country



Source: *Private Labels' market share climbs in 13 of 20 countries across Europe*. 2017. Retrieved from <http://www.plmaininternational.com/industry-news/private-label-today>

To the speed and penetration rate of private labels in Europe compared to the US, helps mainly the interest from the side of shoppers and the inventiveness of retail chains that appear in private brand much more than just another product that conceals their margin (Augustín, 2005). Private labels imply several benefits – not just on the side of the consumer, but also on the side of the trader and to some extent on the side of supplier. They help in increasing the sales volume, economies of scale, lower costs on communication and logistics, and bring the opportunity to input new markets (Machková, 2009). While for the consumer is the main advantage the lower price, for the retailer is it the possibility to enhance the image, increase of supply and demand, enhance of customer loyalty, as well as the minimization of the risks associated with the introduction of new products (Shapiro, 2016; Cross, 2016; Liu & Wang, 2008; Cheng et al., 2007; Huang et al., 2007; Sethuraman & Cole, 1999; Baltas et al., 1997). As the other possible

benefits of private labels for retail could be mentioned not just the reduction in advertising costs and the possibility of determining its own pricing policy, but also the ability and flexibility to change the search and producers, as well as the opportunity to achieve higher margins (Kokemuller, 2014; Machková, 2009; Horská, 2007).

Milk presents a perfect and at same time the most natural beverage with which the human beings meet immediately after their birth and which they use in different forms through round their lives. It is important not just to mention that milk and dairy products are an important source of essential nutrients, including several deficient (especially, in baby food, such as Vitamin D, calcium, and magnesium) (Nicklas, 2009), but also that they can be unquestionably considered as products that maintain the good health, as the prevention of certain diseases, as well as the support for their treatment (Habánová, 2010). Despite the fact that the consumption of milk and dairy products has in Slovak Republic a long tradition (the history of manufacturing of dairy products is in Slovak Republic more than 100 years old), the nowadays trend shows, that there is a permanent decline in it – while in 1989, CzechoSlovak Republic consumed 260 kg of milk per person and had 166 dairies which were centrally managed, after joining the EU, in the Slovak Republic there was allocated a milk quota for milk production, which was set at the level of 1,061.6 mil.kg in 2009/2010 (Kubicová & Habánová, 2012) and further increased to the level of 1,115.6 mil.kg in 2014/2015 (Kubicová et al., 2014). Finally, after five years of a preparatory increase in their level, milk quotas have disappeared on 1th April 2015 (eurostat, 2015). One of the possibilities how to reverse this negative trend is to bring the Slovak consumers to buy and consume more dairy products, especially yoghurts, which are globally the most widespread and most popular fermented milk products, which are well tolerated also by people sensitive on the lactose (Kubicová & Kádeková, 2013) and which consumption is on the up around the globe, driven by three major food trends – the health, convenience respectively snacking and protein (foodstuffs.co.za, 2015). The second possibility is to reduce the price of yoghurts, by what they will become more interesting for price sensitive consumers and the third possibility is to combine the previous two possibilities especially by the promotion and support of sale and consumption of yoghurts labelled by the private label because their price is lower, but their quality is the same one as of the traditional yoghurts. This is why the present paper deals with the issue of products and yoghurts labelled by the private label, their quality and preference from the side of Slovak consumers (focusing on the age under 30 years) what can serve as a helping point of marketers and producers, to know, how the Slovak consumers behave on the market of these products, what leads and discourages them from their purchase, as well as how they see their quality.

2. Data and Methods

The aim of the present paper was to determine the preferences of products and yoghurts labelled by the private labels, as well as the perception of their quality from the side of young Slovak consumers'. In order to achieve the formulated aim, as research methods, there were used the methods of survey and structured questionnaire consisting of 15 questions formulated as closed, so that respondents (total number of respondents was 1,264 randomly selected respondents, from all over the Slovak Republic, with the age up to 30 years, Table 1) had the possibility to choose one, or alternatively more options. The focus group (respondents with the age up to 30 years) was chosen up to the results of authors' previous works and findings – Nagyová & Košičiarová (2014), Košičiarová & Nagyová (2014), Košičiarová et al (2014) – where they have realised, that private label products are mostly bought by young people, students, retired and women on the maternity leave.

Table 1: Characteristics of respondents

Category of respondents	Number	Place of living	Number
Male	499	City	798
Female	764	Village	465
Economic activity of respondents	Number	Educational structure of respondents	Number
Employed	678	Primary education	60
Unemployed	60	Secondary education without A	
Student	395	level	143
On maternity leave	130	Secondary education	590
		Higher education	470

Source: Results of the research

The questionnaire was evaluated with the use of contingency tables, which were prepared by Excel, under which they were subsequently developed graphic representations. For a deeper analysis of the obtained results, there have been set out the following assumptions:

- assumption no.1 – our respondents prefer in their purchase products labelled by the private label;
- assumption no 2 – our respondents see the quality of private label products as comparable with the quality of traditional label products;
- assumption no.3 – the most important factor which discourages our respondents from the purchase of private label products is their packaging;
- assumption no.4 – our respondents prefer in their purchase yoghurts labelled by the private label;
- assumption no. 5 – the most important factor leading to the purchase of yoghurts labelled by the private label is their quality;
- assumption no. 6 – our respondents prefer in their purchase the chocolate taste of yoghurts labelled by the private label.

To test the formulated dependences, there were used the methods of Pearson's chi-square test, Fisher's exact test, Cramer's contingency coefficient and Phi coefficient, which have been counted in the statistical program IBM SPSS Statistics.

3. Results and Discussion

As it was mentioned before, private labels and by that the products sold under them are nowadays becoming much more popular not just between the producers and retailers, but also between the consumers. The reason is very simple – these products are in many cases cheaper and at the same time in terms of their quality comparable to the products sold under traditional labels. The traditional yoghurts but also the yoghurts labelled by the private label produced and sold in Slovak Republic are not an exception. Up to the results of research done by TNS Slovak Republic on the sample of 1,000 respondents in the age between 18-65 years in 2015, it can be stated that almost every Slovak inhabitant (exactly 98 %) has ever bought a private label product and exactly three quarters of them are buying private label product at least for once in a week (tns-global.sk, 2015). This is why the aim of the present paper was to determine the preferences of products and yoghurts labelled by the private labels, as well as the perception of their quality from the side of young Slovak consumers'. To obtain the formulated aim, a questionnaire survey was realized in the time period of 1st January 2016 to 1st March 2016. As it can be seen from the Table 1, the majority of our respondents were represented by women (60.5 % or

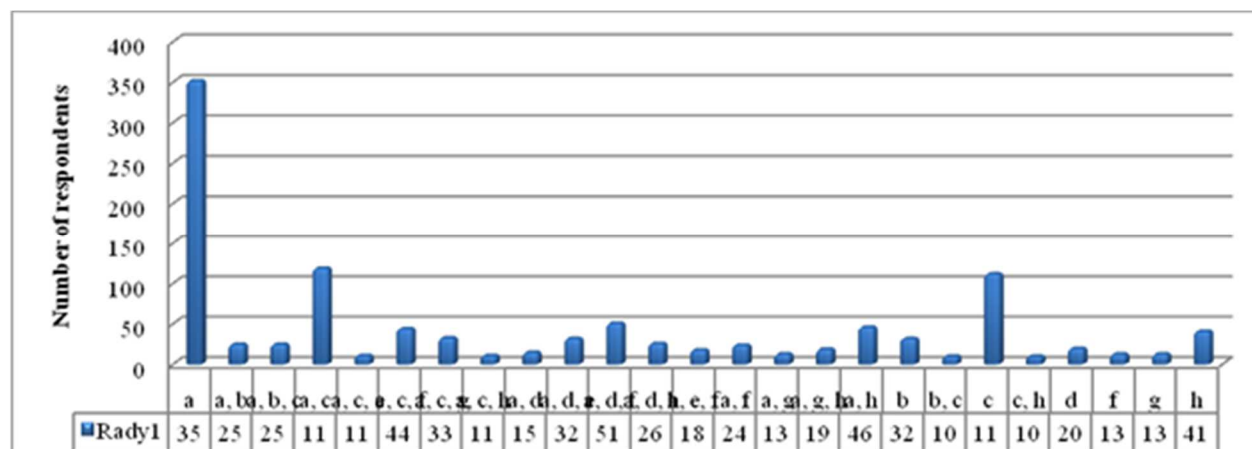
respondents), people living in the city (63.2 % of respondents), people with secondary respectively higher education (46.7 % and 37.2 % of respondents) and employed people (31.3 % of respondents). As it was mentioned in the part Material and Methodology, the focus group was chosen up to the results of authors' previous works and findings, where they have realised, that private label products are mostly bought by young people, students, retired and women on the maternity leave.

Up to the results of our own research, we can stay that the situation with the preference and perception of private label products is by young Slovak consumers pretty good – the majority of our respondents (exactly 38.1 % and 35.0 % of respondents) said that they purchase private label products daily, respectively for few times in a week, exactly 42.5 % of respondents prefer the private label products before the traditional label products (assumption no. 1 is true) and exactly 52.4 % of respondents think that while the private label products are characteristic with lower price, their quality is comparable with the traditional products (assumption no. 2 is true). Connected with the question of frequency of the private label products purchase there has appeared also the question about the dependence respectively independence between the mentioned variable and the respondents' gender, respectively between the mentioned variable and the respondents' economic activity. Both of the formulated hypotheses have been tested with the use of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient. Up to their results we can conclude that while in the case of the first relationship we cannot talk about a dependence, in the case of the second relationship (between the frequency of private label products purchase and the respondents' economic activity) we can talk about a weak but statistically still significant dependence (the result of Cramer's contingency coefficient was equal to 0.082 and the result of Phi coefficient was equal 0.143 what can be interpreted as a very weak relationship) – while employed, unemployed and respondents on maternity leave are purchasing private label products mostly daily, students are buying them mostly for few times in a week.

Because of the need to determine which are the mostly bough categories of private label products, as well as the factors leading and discouraging to and from the purchase of private label products, in the questionnaire were formulated also the questions dealing with this issues. While the results of research done by TNS Slovak Republic in the age between 18-65 years in 2015 have shown that the mostly bought categories of private label products are the paper products, e.g. toilet paper, kitchen towels or handkerchiefs, respectively in the case of food sweets, pasta, non alcoholic drinks, ready meals, semi-finished products and meal and dairy products (tns-global.sk, 2015) the results of our research have shown that these categories, in the case of people with the age up to 30 years, are the meal and meal products, milk and milk products, sweets, salty snacks and frozen meals (Figure 2). Up to the questions of factors leading and discouraging to and from the purchase of private label products we can conclude that the most important factors leading to their purchase are the quality (39.8 % of respondent), previous experience (27.6 % of respondents) and the price (12.5 % of respondents) and the most important factors discouraging from their purchase are surprisingly again the quality (42.4 % of respondents), packaging (20.3 % of respondents) (assumption no. 3 is partially true), content (16.2 % of respondents) and the lack of information about the exact producer (11.4 % of respondents). The mentioned results are very interesting because up to the question, how do our respondents see the quality of private label products, exactly 70.1 % of respondents said that they think that the quality of private label products is comparable with the quality of traditional label products, what to some extant confirms also the results of research done by Nielsen on the sample of 30.000 online consumers in 60 countries in 2014, which results show that most of their respondent think that the quality of private label products has improved over the time (71

% of respondents) and that they are a good alternative to the traditional label products (65 % of respondents) (Nielsen, 2014).

Figure 2: Mostly bought categories of private label products



Source: Results of the research

Explanatory notes: a – meal and meal products; b – milk and dairy products; c – sweets; d – salty snacks; e – cans, pastas, sauces; f – non-alcoholic drinks; g – alcoholic drinks; h – frozen meals

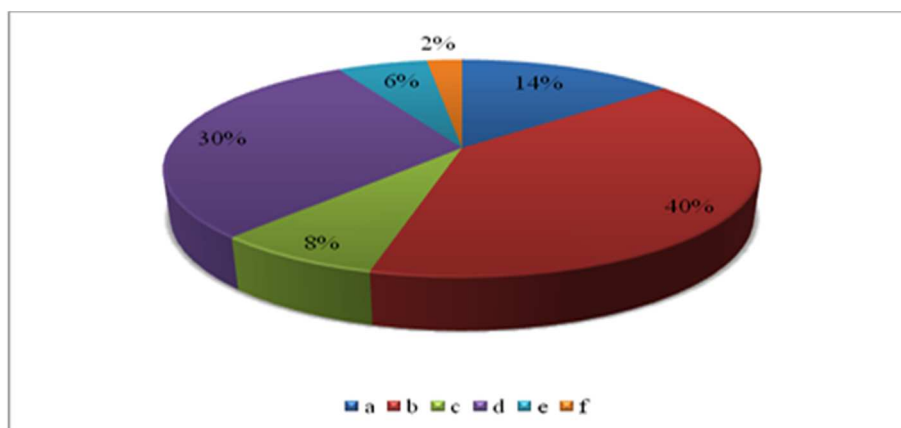
Because of the need to determine, even if there exist a dependence between the factors leading to the purchase of private label products and the respondents' gender, respectively his education, and between the factors discouraging from the purchase of private label products and the respondents' gender, respectively his education, we have formulated the our zero hypotheses connected to the mentioned issues and tested them with the use of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient. From their evaluation is clear that the only relationship which was not confirmed was the relationship between the factors leading to the purchase of private label products and the respondents' gender. In the case of other formulated hypotheses we can talk about very weak, but statistically still significant relationship (the result of Cramer's contingency coefficient was equal to 0.102, 0.108, respectively 0.366 and the result of Phi coefficient was equal 0.176, 0.108, respectively 0.634).

As we have mentioned it before, milk and dairy products represent an important part of human beings nutrition, which is a key source of vitamins, calcium, and other nutritional components. Yoghurts represent the most widespread form of dairy products, which consumption has in Slovak Republic very deep roots. This is why the second block of questions formulated in our questionnaire survey was aimed at the purchase, preference and perception of yoghurts labelled with the private label. Up to their evaluation we can conclude, that the situation with the purchase, preference and perception of their quality is between the young Slovak consumers very good – exactly 38.1 % of respondents and 36.3 % of respondents purchase them definitely and rather, most of respondents purchase them for few times in a week, respectively for once in a month (exactly 28.1 % a 25 % of respondents), more than the half of respondents prefer them before the traditional yoghurts (29.7 % of respondents prefer them definitely and 28.8 % of respondents prefer them rather) (assumption no. 4 is true), the majority of respondents think that their quality is very high and high (44.1 % of respondents and 36.3 % of respondents have judged the quality of yoghurts labelled with the private label with the value 1 and 2) and exactly 93 % of respondents think that the ratio between the price and the quality of yoghurts labelled with the private label is adequate (40.3 %, 31.0 % and 21.7 % of respondents judged the mentioned ratio with the value 2, 3 and 1). Connected with the question of frequency of purchase of yoghurts labelled by the private label there has again appeared the question about

the dependence respectively independence between the mentioned variable and the respondents' gender, respectively between the mentioned variable and the respondents' economic activity. Both of the formulated hypotheses have been tested with the use of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient. Unfortunately in the case of both formulated hypotheses we have to conclude that there does not exist any dependence between the tested variables.

Because of the need to determine, which are the most important factors leading the young respondents to the purchase of yoghurts labelled by the private label, as well as even are the information shown on the packaging of the mentioned products important for the consumers and which flavour they prefer in their purchase, in the questionnaire survey there were also formulated the questions dealing with the mentioned issues. Up to their evaluation we have to conclude, that young Slovak consumers are really thinking about the quality of purchased products and they purchase the yoghurts labelled by the private label because their high quality and lower price – the most important factors leading to the purchase of yoghurts labelled by the private label are their quality (40.1 % of respondents) (assumption no.5 is true), price (30 % of respondents) and packaging (7.7 % of respondents) (Figure 3), 86.8 % of respondents read the information printed on their packaging always and sometimes (43.9 % and 42.8 % of respondents) and the mostly preferred flavours of yoghurts labelled by the private label are the chocolate flavour, white yoghurts and fruit flavour (29.9 %, 17.5 % and 13.1 % of respondents) (assumption no.6 is true). The mentioned results also confirm the results of research done in 2012 which have shown that Slovak consumers consume mostly white yoghurts and 24 % of male and 40 % of female respondents consume yoghurts daily (zdravie, 2012). Because of the need to determine even if there exists a dependence between the preferred flavour of yoghurts labelled by the private label and the respondents' gender we have formulated the zero hypothesis which was tested with the use of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient. Up to its evaluation we can conclude that there again does not exist a dependence between the tested variables, which means that women do not prefer more chocolate flavour of yoghurts than the men.

Figure 3: Factors leading to the purchase of yoghurts labelled by private label



Source: Results of the research

Explanatory notes: a – promotion; b – quality; c – packaging; d – price; e – previous experience; f – recommendations from the family and friends

4. Conclusion

The aim of the present paper was to determine the preferences of products and yoghurts labelled by the private labels, as well as the perception of their quality from the side of young Slovak

consumers'. To obtain the formulated aim, the questionnaire survey was realized in the time period of three months. As the results of the survey shows, the situation with the preference of products and yoghurts labelled by the private labels, as well as the perception of their quality is from the side of young Slovak consumers' very good:

- more than 38 % of respondents purchase private label products daily and over 42 % of respondents prefer them before traditional label products,
- more than 79 % of respondents see the quality of products labelled by the private label as adequate to the price,
- while the most important factors leading to the purchase of private label products are the price, quality and previous experience, the most important factors discouraging from their purchase are the quality, packaging, content and lack of information about the exact producer,
- over 74 % of respondents purchase the yoghurts labelled by the private label and almost 60 % of respondents exactly prefer them before the traditional yoghurts,
- more than 80 % of respondents think that the quality of yoghurts labelled by the private label is very high and high and exactly 93 % of respondents think that the ratio between the price and the quality of yoghurts labelled with the private label is adequate.

Because of the need to perform a deeper analysis of the given issue, in the present paper, were formulated six assumptions and nine hypothesis, which have been tested with the use of the methods of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient, which have been counted in the statistical program IBM SPSS Statistics. From their evaluation is clear, that while all the assumptions were true, only four hypothesis have proved a weak but statistically still significant dependence between the tested variables – while employed, unemployed and respondents on maternity leave are purchasing private label products mostly daily, students are buying them mostly for few times in a week; while in the case of respondents with secondary education without A level is the most important factor leading them to the purchase of private label products their previous experience, in the case of respondents with other forms of education is the most important factor the quality; while for women is the less discouraging factor in their purchase of private label products the price, for men is it the lack of information about the exact producer; and while for people with higher and secondary education with A level is the most important factors discouraging them from their purchase of private label products their quality, in the case of people with primary education is it the price and for people with secondary education without A level is their content.

Based on the results of our research, we can conclude that there are still some reserves and problems which could be improved and eliminated as for example the consumers' perception of the private labels' quality, which has to be improved by producers and retailers, who can promote their products especially from this perspective; the still uninteresting cover of these products, where there can be used more colours and more interesting ink to attract consumers; as well as the missing or very small information about the producer, which could be shown on the packaging of private labels to let customers know, who is the proper producer of them.

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The Impact of Visual Merchandising on Young Consumer Impulse Buying Behaviour : Which gender is more impulsive?

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Abstract

The consumer in connection with the purchasing process meets the various alternatives, which evaluates and decides for one of them - for the one that best satisfies his needs. Attributes that have an impact on the consumer during his purchase-decision-making process, may act on his decision-making process with varying levels of intensity and also with different results. One of the factors which affects the consumer behaviour directly in the retail business is merchandising, which influences impulsive purchases consumers. On the basis of primary data, we can claim that 25 % of the surveyed respondents answered, that almost always buys a product which is exposed outside of its permanent place, and 52 % said that the product buys occasionally. Based on the survey, we can say that visual merchandising has the presumption to influence the impulsive purchase and the objective of this contribution is to point out which of the genders of young people up to 25 years purchases more impulsively - thus, on which gender has the correct exposure of the product more impulsive impact, since men and women are different individuals who react to the same appeals differently.

Keywords: *buying behaviour, consumer, consumer behaviour, retail store, visual merchandising.*

JEL Classification: M31

1. Introduction

In the current competitive environment, main role of each retailer is to try to create a pleasant environment for its customers and to make a need for them to return to retail. Into main elements of this pleasant environment we can include the staff, the interior as well as the exterior of the shop and the layout of individual goods, layout of the tables and also the selection of the right colours, decorative elements and background music are important factors. The article mainly focuses on placement of goods outside their usual place and their impact on impulsive purchases of consumers. Since men and women as customers are different individuals who react differently to different appeals, the aim is to point out which gender reacts more impulsively to individual goods exposure change.

1.1 Definition of visual merchandising

As presentation of goods is often the most crucial factor in decision-making (Oakley, 1990), retailers place more importance on visual merchandising in order to differentiate their offers from others due to the similarity of merchandize nowadays. Basically, visual merchandising can be described as “everything the customer sees, both exterior and interior, that creates a positive image of a business and results in attention, interest, desire and action on the part of the customer” (Bastow- Shoop et al., 1991, p.1). Mills et al. (1995) suggests that “visual merchandising ranges from windows/exterior displays to interior displays including form displays and floor merchandising along with promotion signage.” A lot of authors state different visual merchandising techniques in the existing literature.

The aim of visual merchandising is to attract an attention and interest of the customers. Its focus is to simplify ordering process, to appeal to impulse purchases of consumers and create the right atmosphere. The main purpose of this type of merchandising is to present the goods in a way that is pleasant for consumers, communication with clients and increase shop visits with the main goal of increasing product sales through design. (Kita & Folvarčíková, 2011)

Popularly, impulse buying can be defined as “any purchase that a shopper makes and has not been planned in advance” (Kalla & Arora 2010).

The term visual merchandising defines everything that customer perceives with his/her senses and especially what he/she sees, which leave him with a positive feeling that motivates him/her to buy the product or service respectively. 80% of consumer's perception is based on visual contact. It is obvious that one image can replace up to 1000 words. Creating a positive image is limited by just a few seconds therefore welcome and entry to the shop has a big impact on whether the consumer enters it. With a positive support of visuals, the customer decides to enter the store. (Žiačiková, 1998)

Žiačiková (1998) also claims that visual merchandising is mainly used for „impulsive“ categories of goods commodities. These commodities include for example chocolate, sweets, durable pastries, salty pastries, chewing gum and ice cream. Less impulsive is pastry, dairy products, delicacies, meat and rational nutrition. A rule applied in merchandising states that the smaller the goods are the more impulsive they are. Bigger goods are usually more expensive and longer to consume.

According to author Žiačiková (1998), the biggest limit that merchandising has is the space. Good areas of selling space (also called hot zones) include those where many people are, hence cash register zones, busy aisles, shelf ends, shopping junctions, outlets. As a cold zones we can consider corners, narrow spots and dead ends.

Communication tools including merchandising have almost unlimited possibilities for use. Correctly implemented merchandising stimulates customers in a significant way into making a purchase and it is the trader's skill to use this fact and turn it into positive economic results. The application of merchandising elements in practice has undoubtedly direct impact on retail turnover and profit increase. Logical aim is a satisfied customer who feels comfortably in a store where merchandising is more emphasised and shopping becomes a certain experience. („Retailmagazin.sk“, 2016)

Visual merchandising refers to the manipulation and use of attractive sales merchandise and floor plans in engaging customers as well as boosting the sales activity. It entails displaying the products that are being sold in ways that attract customers or capture their attention to the benefits and best features of the products. Both services and goods can be sold using this strategy. A marketer needs to highlight the benefits and features of the service or product that they are marketing in the best way possible. Retailers want their stores to attract consumers by assisting them to find the merchandise they desire and to motivate them to make planned, unplanned and impulse purchases, and to finally provide them with enjoyable shopping experiences (Levi & Weitz, 2009).

2. Data and methods

The aim of scientific article was to evaluate the impact of visual merchandising on younger generation, drawing attention to finding out which gender is more impulsive during shopping.

The survey focused on the young generation respondents aged between 18 and 25 years. The questionnaire survey consisted of two parts. The first part included the questions about the

visual merchandising and factors which influence the decision making process in retail store. The second part included the classification questions about respondents.

While preparing the paper, there were used the secondary data (various publications and research dedicated to the issue of visual merchandising in retail stores) as well as the primary data formed on the basis of own survey.

The questionnaire survey was conducted on-line in four months, from November 2016 to February 2017, and it was attended by 208 young generation respondents. Out of this number, 77% were women and 23 % men.

The questionnaire survey was evaluated graphically and by using selected statistical method. We used the Pearson's Chi - Squared Test.

While examining the correlations within the obtained data, we have developed the following scientific assumption and used them as the basis for the formulation of null and alternative hypotheses:

Scientific Assumption 1: We assume that there is women is more impulsive than men.

3. Results and discussion

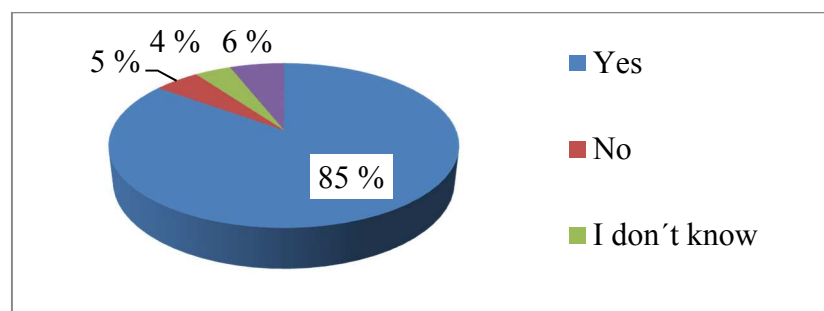
In order to achieve the main objective of this scientific article, we have selected several questions from the questionnaire survey and evaluated them graphically. We have also examined some of the selected questions by means of statistical method with an intention to verify the accuracy of the scientific assumption.

The aim of the questionnaire survey was mainly focus on visual merchandising, its individual tools and the impact of these tools on the younger generation.

The questionnaire survey was divided into several parts. The first part was focused on the classifying questions about respondents. Regarding the age of the respondents, the most represented group up to 60% was young people aged 18-25. The second largest group was respondents aged 26-35, up to 21%.

Based on primary information, we can claim that visual merchandising affects the consumer behavior of the young generation aged 18-25. Young consumers are also greatly influenced whether or not the related products are exposed side by side (so-called cross selling). Based on consumers' responses, we found that as many as 85% of respondents claim that goods exposed like this make their purchases easier. It is therefore obvious that young people searching for goods would use this trend of displaying of related goods next to each other. One factor may also be the time they would save when searching for individual types of goods.

Figure 1: Exposed of products and their influence of impulsive purchase



Source: own processing

In the questionnaire survey, we were wondering which factor influences consumers the most in the quick search of goods, as young people replied that they would accept if more related goods were exposed side by side. Up to 58% of respondents claim that when searching for goods quickly, that factor is always the exposure of the goods in the same place. The consumer is often disgusted by the fact that he must look for the goods elsewhere. Therefore, it is essential for retailers to always leave the goods at the very first place and to use this way of presentation in their strategies.

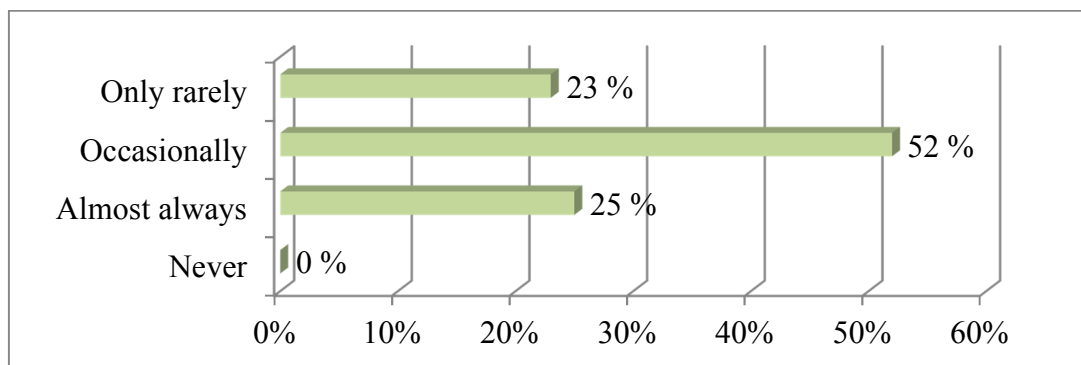
Retailers often try to appeal to consumers' impulsive decisions right at the point of sale, and therefore they also use merchandising tools. Based on various surveys, we know that up to 80% of purchases are made impulsively, meaning that customers at the store also buy what they have not planned to buy but it attracted their attention and their impulsive purchase was affected by it.

That's why we have asked the respondents whether they were subject to exposure to the stock in the sale at the intersections of shopping malls or at the entrance of the shop. 34% of the respondents claim that this fact will certainly affect them and 48% say „rather yes“. This means that the exposure of goods outside their permanent location of exposure has an impact on the impulse purchase of consumers. Consumers will buy this item unplanned.

Goods displayed in this way - apart from their permanent location will affect the consumers. Therefore, the questionnaire survey questioned how often it would happen to buy these goods. Based on the replies, we know that 25% of respondents will buy these items almost always and 52% of them will buy it occasionally.

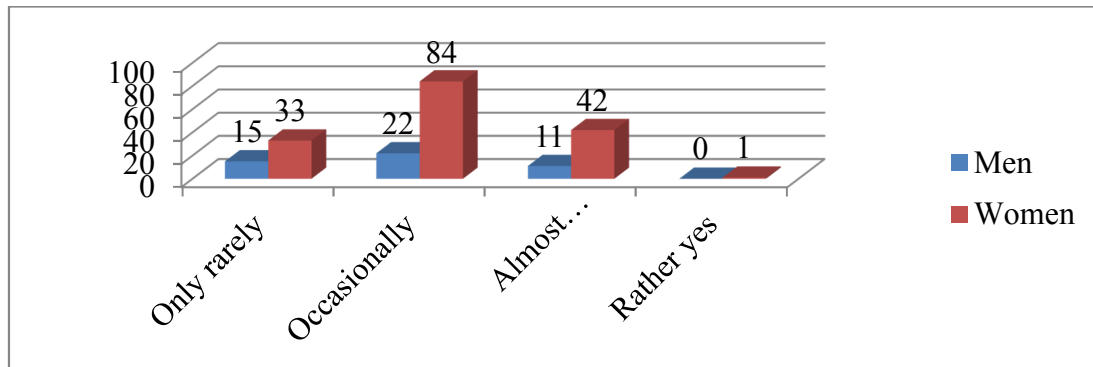
But none of the respondents had ever chosen the option „never“. This issue has again confirmed that visual merchandising and the correct arrangement of right goods at the right places at the right price appeals to the impulse purchase of consumers, and so the consumer also purchases goods that were not planned to buy but impulsively influenced his purchasing decision-making process.

Figure 2: Influence of permanent location on the impulse purchase



Source: own processing

For this issue, we have also set out a scientific assumption to see if women are more impulsive than men or not. We have used the measurement of associations through the Pearson's Chi square.

Figure 3: Impulsive purchase of men and women

Source: own processing

In terms of the above stated questionnaire questions, we also determined the scientific assumption through which we investigated whether the influence of visual merchandising depends on the gender- which gender is more impulsive during the consumer buying process. Based on the statistical analysis, we found the existence of statistical dependence, so we confirmed the correctness of our scientific assumptions. The value of the test characteristics was 3, 84146 and the table value 0,30098. Based on the above, we can say that since the test value is greater than the table value, we accept the H0 hypothesis and we can assert that women are not more impulsive in shopping as men.

There are also factors such as shop atmosphere, smell, light, and much more which have an impact on the consumer behavior at the point of purchase. In the next question, we investigated the impact of these factors on the gender.

4. Conclusion

Following the results of our research conducted on a sample of 208 young generation respondents in the questionnaire survey. Of this, 77% were female and 23% male. Based on the questionnaire survey, we can say that young people notice exposure of goods and it has an impact on them. Yet, up to 25% of respondents always buy goods exposed at the intersections of the shopping malls, outside of their placement and occasionally up to 52% of the respondents. Therefore, it is evident that the exposure of goods outside of their placement affects the impulse purchase of consumers.

The most significant factor influencing quick search in store shelves is that goods are always placed in the same place and that retail does not change it. This answer was accepted by 58% of the respondents.

On the basis of the primary information found, we can claim that women are not more impulsive when buying goods as men. This can also be due to the fact that young people aged 18-25 think more rationally than older generations and always consider their purchase. Their education in marketing and various tools is greater than in other age categories.

This fact can also be influenced by the rationality of young women, who are affected by the reference group, the family. Young women try to duplicate their mothers, who are rational in many ways, also due to the impact of one of the most important factors, the household income.

It follows that conducted this survey has several restrictions that should be borne in mind in interpreting the results of survey and in particular their generalization. In the future we plan to implement larger and more comprehensive research. In addition to traditional methods of

marketing research will be used also selected neuromarketing techniques, for example eye-tracker and many others.

In summary, the submitted paper points only at the use of visual merchandising in retail store and influence on impulsive purchase and suggests further research possibilities but as well as on the quantity of collected secondary data can serve to retailers in upgrading their atmospheres in order to better meet their objectives and the needs and expectations of their customers.

These results show that many merchandising tools have different gender effects, and young women are not more impulsive in their purchases. Thus, the different exposures of goods do not impress women more impulsive but we can say that exposing of goods at intersections of shopping malls, at the end of shelves, does not call for the impulsive purchase of women more than men.

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Efficiency of the automatic milking robot and the manager skills

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Abstract

The national and international research handle a lot with the effects of agricultural technology like a method of higher efficiency. This paper examines the efficiency of the latest milking technology, called automatic milking robot, based on the information from an experimental dairy farm in Hungary. The farmers need to change numerous things because of the new technology, for example in feeding, in animal welfare, etc. According to our study the most important part of the adaptation of the new technology is the human factor. We examined the change of milk production thanks to the technology change and the management change. In summary we found that the manager is the most important factor in the technology adaptation.

Keywords: strategic thinking, precision agriculture, robot technology, manager skills

JEL Classification: Q130, Q160, M210

1. Introduction

The animal husbandry sector present a relatively less account in the agriculture sector from profitability point of view. As a matter of course, there were some estates which were able to preserve their profitability and their position. The reason was the relatively stable financial conditions. The good credit rating provides the investment opportunities and the success of subsidies and tenders. (Törőné Dunay, 2012)

Reduction in the cost and in the number of diseases are preconditions for the success of dairy farm (Ózsvári et al., 2003). The farms would be able to produce on competitive terms if they continuously monitored the changes and the latest innovations and adopt them in the appropriate conditions (Illés, 1998). The voluntary milking system (VMS) is an innovation which helps to improve the profitability and competitiveness of the agricultural estate. Increase in the labor cost was the indicator of the development of automatic milking systems in the middle of 1970s. This development process establishes the robotic milking system which is able to work almost without human interferences. Thanks to the robotic milking system the numbers of human interferences are reducing parallel with increasing the milking parameters and decreasing the number of such illness like mastitis. The substantial reason of the loss of revenue is the mastitis as seventy percentage of the loss is caused by the mastitis. (Ózsvári et al., 2003).

The expectation of the robotic milking system is the continuous circulation of the livestock. Feed, milk and relax when they want to according to their own needs and habits. Robotic VMS is supplement with automatic feeding, milking, milk analyzing, and reproduction monitoring. The application of this system delivers lower feeding costs, improves breeding performance and health as well as production. The milking capacity of the modern VMS is 60-65 cattle per day (Lencsés et al., 2014/a,b).

Farmers have different motivations to adopt the voluntary milking system (VMS). Five motivation factors for farmers decide to invest into VMS were defined by Hogeveen et al (2004) compare to the conventional milking system: less labor, replacing employee, increasing flexibility, the possibility of more than two milking time per day, need for a new milking system.

The husbandry and feeding technologies are the key factors in the animal welfare. (von Borell, 2001) Numerous research engaged with the stress factors on dairy farms. The milking induces a high stress for the cattle in the conventional milking systems. The routine treatments, the fear of humans, the fear of pain induced stress reaction (Gygax et al., 2008, von Holst, 1998, Rushen et al., 1999, Waiblinger et al., 2004). The stress is defined by several physiological parameter (Stafford - Mellor, 2005; Stewart et al., 2008). The mental stress has a negative impact for the milk production (Weiss et al., 2005).

The possible solution against stress is the habit. In case of dairy farms the cattle need to custom the technological environment (Bremner, 1997). A German research measures the habits of animals due to their heart rates. According to this study the heart rates are significantly higher five minutes before the entrance in the milking robot and in the first five minutes of the milking it decreased rapidly (Wenzel et al., 2003). The stress against the robotic milking breaks off due to become accustomed with the robot (Hopster et al., 2002; Weiss et al., 2005). The researchers do not find any significant differences between the conventional and robotic milking in the animal welfare point of view (Hagen et al., 2005; Gygax et al., 2008). The habituate is also introduced as an important factor of the milk production (Weiss et al., 2005).

The VMS milked an average of 52.7 cows with 2.69 milk per cow per day, a milk yield of 549,734 kg/VMS per year, and a milking downtime of 1,947 h/yr. Their capacity can be increased by 16 cows under ideal conditions, attaining a 33.7% (Castro et al., 2012).

The yield per VMS per year could be increasing with 90%. Wirtz et al. (2004) reported that milk production could increase up to 20% if cows were milked 3 times daily with a VMS. Consequently, the average milking per cow would decrease from 2.69 to 2.48, per day. This would make it possible to recoup the cost of the system earlier, taking into account that the fixed costs are the same regardless of whether work occurs below maximum capacity (Castro et al., 2012).

The farms with VMS have approximately 29% less labor than earlier. Conventional milking systems made larger revenues (€7,899), but farms with VMS had smaller costs, especially livestock (€2,354) and feeding costs (€2,918). The fixed costs (excluding labor, depreciation, and interest) were larger for the VMS farms than for the conventional farms (€4,589). Larger fixed costs were caused by larger contractor costs (€6,422) and costs for gas, water, and electricity (€1,549) (Bijl et al., 2007).

VMS has helped the farmers to spend less time on monitoring the cattle. More data about the herd has a potential to stimulate farmers' interest in dairy farming, several find themselves drowned in data. VMS requires a personal motivation and proactive behavior of manager and staffs. Further, farmers need a minimum of interest in technology to succeed with VMS, as well as proactive behavior to adapt the technology to their specific needs (Hansen, 2015).

According to our early research the yield threshold is 23.98 litres per day per cattle in case of one VMS and on average cost conditions (Kovács et al. 2014).

2. Data and Methods

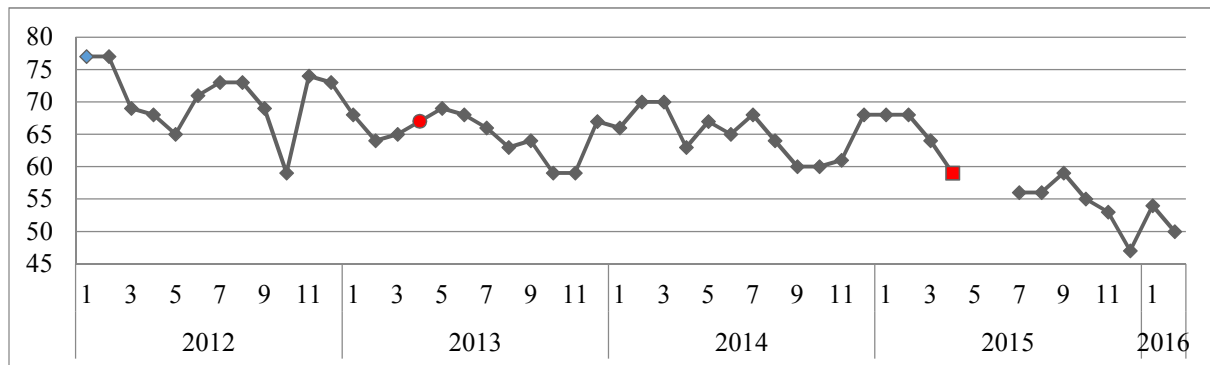
Our experiment was made at Józsefmajor Experimental and Demonstration Farm of the Szent István University of Gödöllő. The farm was established in 1992, by the Department of Farm Economics and Management of Gödöllő Agricultural University (the present Szent István University). The farm is specialized in fresh milk production. The presently operated DeLaval Voluntary Milking System (VMS) was installed in April 2013 in order to improve the quality of the milk produced. Before this investment, the number of livestock on the dairy farm was roughly 100 milking cattle. The total milk production in this time was approximately 650 thousand litres per year.

The milking data are collected by Livestock Performance Recording Ltd. In this study the examined period starts from 2012. This study examined the milk production in one year with conventional milking system, more than one year with VMS and some months after manager change. The latest data come from February 2016 because Livestock Performance Recording Ltd does not collect milking data from Józsefmajor Experimental and Demonstration Farm.

3. Results and discussion

The VMS was installed in April 2013. There were about 80 milking cattle before the installation but because of the capacity of VMS the herd need to be increased to 64 milking cattle in the starting period. The highest herd was 70 cattle which is suit for the paper form capacity of the robot in March 2014. In practice the manager decided that they decreased to 60-65 cattle the herd. The herd decreased to 63 milking cattle in April 2014. (Figure 1) After the herd was decreased the milk yield was 25 litres per cattle from the latest 29 litres. In this period the aim was to preserve the herd and to keep the production above the threshold yield. According to our calculation, the threshold yield is 23.98 litter so every decision made according to reach this level.

Figure 1: Number of milking cattle on the pilot farm



Note: ● installation of VMS

■ Managerexchange

Source: Livestock Performance Recording Ltd.

Figure 2 shows that a persistent increase in the efficiency in production, after a year period of acclimatisation. The peak level was 31 litre milk per cattle per day in one year after the installation. It was 50 percentage increasing relation to the period before VMS where the production was around 20 litre. This yield increase is thanks to not only the direct effects robot but the requirements of the system. The robot require some modification in the husbandry and in the feeding for example better hoof care treatment, careful udder treatment, feed receipie exchange, better decision thanks to the better monitoring. The aggregation of these changes lied to the higher milk production. The improved recognition and visibility of rare diseases (e.g.

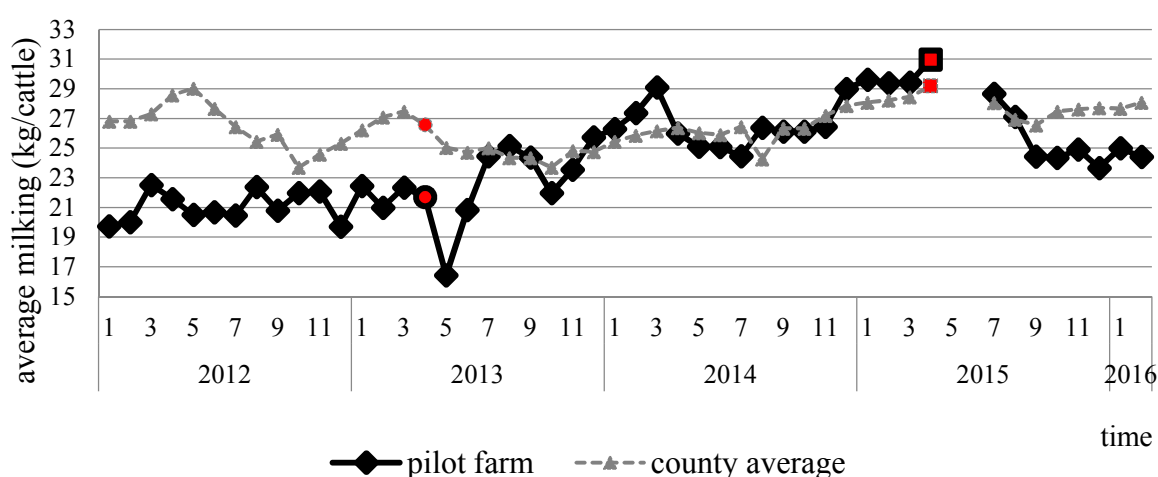
mastitis) the number of occurrences are less and the blackout time of the cattle is shorter than earlier was it and the failure of milk is also less. The robot give more precise and personal data about the herd which help to make better decisions and improve the efficiency.

April 2015 was a breaking point in the management. The new manager and the central management made some unfounded decision about the husbandry, the feeding and the culling. Thanks to these decisions the milking average increased to 23 litre from the earlier 30 litre. This was a 30 percentage set back in just a few months. The county average was 27-28 litre per cattle in the same period and the best farm produced almost 40 litre milk per cattle per day (Figure 2).

In 2014, the feeding recopies were exchanged for an expensive one which helps the cattle to produce almost 30 litre milk per day. But the new management decided to return to the earlier recopies which was not able to keep the higher milk production level. The milking average has gone around 24 litre per cattle per day which was a little bit above the threshold point. This levees is the minimum but not enough for the profitable operations.

In the examined period, there were an approximately 2 littered setbacks in every October (Figure 2). The reason of these setbacks were in begin of the new silos. The cattles need some months to get used to the new harvest year's feeds.

Figure 2: Milking average



Source: Livestock Performance Recording Ltd.

Note: ● installation of VMS

■ manager exchange

4. Conclusion

The examined period is a good example to show that the installation of a new technology has a period of acclimatization and under this period the production has showed fluctuation. According to our study, this acclimatization period is about one year in case of VMS even the managers were committed to the new technology. This period was the time of learning and experience with the advantages and disadvantages of the technology according to the capacity of the system. The focus was on to grow the intensity of production in this learning period. This study shows that how the manager decisions affect the milk production. The new manager had less experiences in dairy farm and did not have any experiences at VMS. The other problem was that the staffs were not committed to the new manager as numerous good employees quitted. These changes together led to the decrease of milk production and efficiency.

The learning period of the technology is longer in the agriculture than in the industry because of the specialty of the agricultural production, long production period, for example. In many cases, the effects of a decision is realized a few months or years later. In case of manager exchange we need to calculate these specialties also. Even a well-founded manager exchange could put back the productivity for months. The farm needs to be prepared for these changes and put backs.

This study is a good example to show that the modern technology is a good device to increase the efficiency but itself alone is not enough to reach a higher productivity. The manager personality, knowledge and skills are the key factors of technology efficiency.

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Globalization – In the Direction to Management in Informational Dimension

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Abstract

To the most important factors limiting human activities, belong time and space barriers. Management is an information and the material activity. The development of means and transport infrastructure has always been directed at barriers' leveling down. The breakthrough in this regard had began with the communication development and actually took place at the time of the Internet's spread. The network has helped to level the barriers down, but only in the informational dimension. Globalization as a rapprochement of locations regardless of distances separating them, is a particular result of management development in informational space. The purpose of this article is an identification and analysis of factors affecting the management's effectiveness in the conditions of globalization. The purpose is also the analysis of management's dependence, in the information and material dimension.

Keywords: information, globalization, information management

JEL Classification: F01, F60, D80

1. Introduction

A man, from the beginning of his history, works on two basic surfaces. The first one is related to the material life, in which each action is being physically performed and aimed at obtaining a physical effect. Hence, this surface should be defined as the real one. To present this surface's characteristics, the dictionary definition's of real, reality and physical can be used. Real means "real, true, actual, possible to achieve, achievable" ("Słownik języka polskiego", 2017), reality is "reality, something really existing, true" ("Słownik języka polskiego", 2017). Physical in turn is "material, accessible to the senses, concerning the human body, sensual" ("Słownik języka polskiego", 2017). For the purpose of this article, the physical surface of human life, can be defined as: everyday and observable only by the use of eye organ or with the eye and ear organs (the "observability" of the hearing must be related to the possibility of visual observation) the sphere of human life, in which the materiality and actions' and effects' reality are the basic determinants.

The information space of human life is, in turn, the area of its functioning, that is related to information. Because information is something non-material, it can be defined as an intangible or virtual space. Intangible is a "non-material matter - a substance that creates the universe, not being a matter" ("Słownik języka polskiego", 2017). Virtual is "created by human mind, but probably existing in reality or able to exist" ("Słownik języka polskiego", 2017). Based on the quoted terms, the informational surface can be defined as: a non-material space - universe-forming substance, that is created in the human mind by providing information that reflects reality: either physically present or physically possible, but also one that does not exist and is not possible to exist in the physical sense. Informational surface, in short, can be described as a place (area), in which all information necessary to normal every-day human's functioning exist.

Both spaces are penetrating each other. Because informational is related to the human mind, it can be stated that the action in the physical space, results from the action in the informational space. On the other hand, however, it should be emphasized that this dependence also occurs in the opposite direction. As a rule, every action is the result of information, but also is a source of information that influences the activity - conscious and unconscious information. Globalization and globality are the concepts, that must be associated with the terms of: the whole, the complexity, but also the tightening, approaching, removing the barriers of time and place. It can be said that globalization is related to the considered material world's "shrinking".

The purpose of this article is to identify the factors that have influenced the globalization. It is also the fact, that globalization should be considered as a phenomenon that occurs primarily in the informational dimension of human life. The goal is to identify the benefits and dangers resulting from life in globalization conditions in the end.

2. The space in human being's functioning and management

Human life has always been associated with the place, the area of its functioning and management. S. Lachiewicz and M. Matejun point to the existence in the ancient times, three spheres related to human life's management. There were (Lachiewicz & Matejun, 2012, pp. 85-86): government and administration, military, economic and social sphere. Analyzing the selected by the authors sphere of life under management, it can be stated that they are also present in the present time - for individuals, states (communities, groups) and enterprises as well. The military sphere is related to expansion and competition in the economic context - the pursuit of goals, gaining advantage and dominance. What differs management from the beginning of human existence till present times is:

- Goal - gaining food, survival, military rivalry, getting the best places to live was repressed by market success,
- Used means - along with human development, technological development took place as well. The military sphere, which at first had a key importance in this respect, was supplanted by the spheres of government and administration. At the same time it should be pointed out that economic development is now the result of development in the military field,

It is noteworthy that the current spheres: government and administration and military (in the form of competition, rivalry) are subordinated to the economic sphere. Its goals are a measure of action on every level (Ślusarczyk & Kot, 2012, pp. 45-54).

According to W. Wytrązek, management can be characterized by selecting four basic activities: planning, organizing, conducting, controlling. Management is the process that drives an organization to achieve its goals in an efficiently and effectively way" (Wytrązek, 2011, p. 317). The management's basis is a man in every sphere. This is due to the fact, that this man is the basis of life in our world. All that he does, what he creates, what he participates in, is nothing but the human structure. Structure subordinate to the purpose of its existence and which for this reason govern exactly the same principles as human life (Jemieliński & Latusek, 2005, pp. 11-12).

Management is related to human action, performed in a specific area. The management area is dependent on the purpose of this management. Can be distinguished here among others: public administration, organization, building, department management and etc. It should be stated that the management, accompanying man in his day-to-day operations, is related to the realization of goals, occurring at all time. It is therefore related to the place of occurrence of causal relationships affecting the ability to achieve goals.

Taking into account that the management indicator is to achieve the objectives efficiently and effectively, it must be recognized that it is carried out in the area in which the manager has at his disposal all the necessary resources and raw materials. In the case of deficiencies, new sources are being searched. As a result of this, the management sphere changes. Another factor influencing the management sphere (managed) is the presence of management target recipients. It is limited by the technical ability to reach the customer but also by the customer itself.

Increasing the area of operation (management) has always been one of the goals of human functioning. The technological development was largely subordinated to it. It particularly refers to transport means' and information-communication technology's development. "Transport (...) fulfills the need to move people and goods. Transport of goods is an essential element of logistics systems, realizing tasks related with the movement of materials, components and finished goods in supply, production and distribution subsystems (Prachar & Fidlerova & Sakal, 2014, pp. 141-146). From the trade participants point of view, efficient transport may be about the effectiveness of commercial transactions, both in international and domestic trade. On the other hand, with regard to people, transport ensures the fulfillment of human life needs ("Ekonomiczne i organizacyjne aspekty transport", 2013, p. 7). The transport and its infrastructure development, in general was aimed at increasing the territorial area of its own impact. At a time when it was possible to move for long distances, this development has gained another goal. It was the maximum possible reduction of the traditional barriers of time and place that traditionally accompany man.

Here, one of the most important and, at the same time, the most difficult to identify, management's problems (objects) has been addressed. The factor that currently determines: whether success or failure, overwhelming loss or loss. It's a time. One of the most interesting aspects of business management of time's definitions comes from physics. "Time does not exist beyond motion, matter and space. These four elements are closely related, forming the notion of space-time (...), they are not opposed but complementary to each other" (Bieniok, 2016, p. 177). Time complementarity is being pointed out: time, movement, matter and space. Time can be treated as the scale of a business, but also of the entire market. The shorter the time of: identifying upcoming market events (including customer needs and requirements), tailoring actions to real and anticipated needs, taking advantage of opportunities and avoiding threats - on a "time" scale, towards competitors - the greater the chance of winning a competitive advantage. The movement can be treated similarly. With the increase of: the dynamics of operation (based on traffic), the number of potential partners, the flexibility of the operation increases the chance of success. While time and movement can be seen in the context of the scale of effectiveness, space and area should be considered from the point of view of the object and place of function. It is also imperative to agree with its complementarity in management also. Time is inherent with movement, both of these concepts are in turn closely related to the "object's²²" movement in time, taking place in a given space. By analyzing the effectiveness of management in terms of the four factors mentioned, it should be stated that it is related to: activities with the maximum possible mobility, dynamics conducted with material participation, in the largest possible space, bypassing the time and place barriers. As will be shown later in this article, this is only possible with regard to the functioning of the information space of human life. By developing the transport and its infrastructure, man strived and strives to reduce time, increase mobility, eliminate time and place barriers (in physical dimension), eventually increase the space of action and impact. The pursuit of reducing time and space barriers is

²² Can be material and non-material factor, ie. information.

related to the fact that "time is the most valuable asset of a manager, which delineates the limits of the possibilities" (Olejniczak, 2013, p. 4).

3. Information management and globalization

The pursuit to get the new functional areas is naturally associated with the globalization's issue. As noted by A. Brzozowska, "globalization is in fact a stronger integration of states and people in the world, caused by the tremendous reduction in transport and telecommunication costs and the elimination of artificial barriers in the flow of goods, services, capital, knowledge and people from country to country" (Brzozowska, 2013, pp. 6-7). According to the above definition, globalization is connected with convergence, blurring of borders, integration. In this respect, globalization should be seen in the context of increasing the space of own business. As A. Brzozowska further notes, "any organizational or social activity has now a global dimension, and the effects of this activity take the international forms, decisively determining everyday life" (Brzozowska, 2013, p. 6).

One should consider here, what the global dimension of functioning is. As was mentioned earlier, the natural pursuit of "expansion" was related to the development of physical transport capabilities - transport and transport infrastructure development. At the same time, it should be noted that globalization is also related to human activity in the information dimension. Identifying, recognizing, and expanding areas of functioning has also been driven by the desire to acquire new information.

At the beginning, it concerned the issues of human existence: food and safety. With the development, the causes also resulted from commercial activities. What to provide what to acquire, have been the key point of interest with regard to information. In this regard, the development of transport was also linked to the organization of a continuous flow of information. The material and information surface of operation were closely interrelated. Their gradual separation occurred with the development of modes of communication unrelated to the physical movement of man - the information flow.

The communication development, and consequently material and informational sphere of functioning clear separation, finally has occurred with the information-communication technology development (Bajdor & Lis & Ptak, 2016, pp. 22-32). It is important here the moment recognition when the possibility of transferring data in the form of today's technology information has come to light. In this respect, the Internet has a particular role in the development of the network (Oleksiejczuk & Oleksiejczuk, 2009, p. 57). As M. Szpunar observes, the Internet has allowed man, to overcome time and place barrier in every sphere of his existence (Szpunar, 2008, pp. 60-62). It let himself be in any place and at any time. However, this presence is exclusively related to functioning in the informational dimension only. Time and place limitations further limit human life in the physical dimension. Thanks to the development of transport, the movement is much more efficient and faster. But it is not as fast as movement in the informational dimension.

In this respect, the relationship of: time, movement, matter and space acquires a new meaning. This is particularly noticeable in the field of management. It can be said that globalization understood as tightening, rapprochement, acquires a new meaning in the context of information. The world in informational dimension has become a global village. In the Polish dictionary it is defined as: "A world in which people, by means of mass media, are experiencing the same events and using the same products of mass consumption" ("Słownik języka polskiego", 2017). The global village, which can be considered in the context of human information space, is a "place" in which we move very fast, in a short (negligible) time, in space corresponding to the

known and inhabited world (Bajdor, 2017, pp. 125-130). The matter is the information here. This is a "place" whose key features are dynamism and variability. At the same time, they are features that characterize modern economic reality. It is widely written about the dynamic, changing and turbulent market or environment (Masłyk-Musiał & Rakowska & Krajewska-Bińczyk, 2012, p.58). According to the author, this is due to the fact that modern man functions primarily on the information level. Everything he does is the result of the information that reaches him, everything he does is a source of information that influences the actions of other people as well. Contemporary man has access to huge amounts of information ("Za dużo na raz", 2017). The event in the form of information is almost immediately available. A key success factor is to acquire and use information in the shortest possible time. It is also important in this regard to provide, correct, reinforce, deny information related to the company and its business activity. It also needs to be implemented as soon as possible. It can be said that time and information are a determinant of effectiveness. On the other hand, as S. Klein rightly notes, time is information (Klein, 2009, p.133). It is therefore possible to say that it is the information and its management, or in fact management of information in the world it is now a key success factor. Modern man not only uses information, he lives in them. Therefore, he has to managed in order to achieve the goals that set his life, both in private and professional terms. There is no limit to the information space, there is no time limit and space, is a global village where all the people and structures that make up (including companies) are close together. In this respect, it is an ideal global dimension.

According to the research results conducted in 2016, 59% of polish respondents believe that the increase in global economic connections and dependencies and the resulting international business growth is positive. Only 17% of respondents have the opposite opinion. 12% do not notice positive or negative effects. 61% believe that globalization has a positive influence on the Polish economy. The benefits of globalization 57% among workers point out. For consumers - 56% of respondents. The least positive effects are recorded in the group of farmers. 41% of them notice positive effects, however 38% consider the effects to be negative. According to the present survey results in comparison to the one from 2003 (before Poland's accession to the EU), the number of people perceiving positively globalization has increased since then. In 2003, 58% of respondents believed that globalization had a negative impact on poor countries, only 21% had an opposite opinion. Positive results, among 82% respondents, have occurred in the rich countries, negative effects - 3%. For comparison, in 2016, the positive effects for the poor countries 37% respondents indicated and the negative effects were indicated by 43% respondents. In wealthy countries: positive effects - 79%, negative effects - 7%. The respondents said that globalization contributes to a 38% increase in world living standards, the opposite opinion had 24% respondents ("Postrzeganie globalizacji gospodarki", 2016).

4. Conclusion

Globalization is a positive phenomenon. Blurring of borders, rapprochement and cooperation are the drivers of development. two main factors that have affected globalization can be identified here. The development of transport and the development of information and communication technologies should be included here. As regards the second factor, the development of the Internet has played a special role as well. Human life can be considered in the context of functioning in the information and material (physical) dimension. Information being the basis of decisions affects physical life. According to the author, it can be stated that the informational dimension has a greater impact on human life, both its private and professional parts. It is therefore important to recognize that the development of information and communication technologies is one of the factors that has the greatest impact on

globalization. He also increased the speed of life, thus increasing the dynamics and intensity of change.

As we live in times, when the way we function is determined by phenomena such as globalization and dynamics, where information play a decisive role, it is necessary to manage not so much information as information management in the information world. Information determine the actions of all people and structures that make up, including companies, and all activities at the same time are the source of information that influences the actions of others. This applies to information obtained and generated in a conscious and unconscious manner. Therefore, they cannot be limited to their acquisition, processing and use. Management is needed, the goal of which is the success of man and the company.

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Consumers' preferences at drinking beverages

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Abstract

*In addition to economic, geographic and environmental indicators quality of life is significantly affected by public health indicators. These are conditioned by the way of eating, variety of food and intake of plenty of fluids. As the range of drinks on the food market is wide, we examined consumer preferences with a drink in five age categories. The survey was conducted in February 2015 with using a questionnaire. Two hundred respondents were involved. We found out that in almost all age groups prevailed drinking beverages in the volume of more than two liters a day. Exceptions are respondents aged 36-45 years where the majority of fluid intake has been in the range of 1-2 liters per day. Respondents prefer drinking water, mineral water and sweetened drinks. Statistical significance has been tested by χ^2 -test criterion as well as *p* values. The evaluation of associations has demonstrated that the age has the highly significant effect on the type of beverage consumed. Younger respondents prefer sweetened drinks, older respondents prefer drinking water and mineral water.*

Keywords: consumers, beverages, preferences, χ^2 -test of Independence

JEL Classification: M 31, I 10, C 12

1. Introduction

Understanding the customers' needs and the identification of factors affecting the buying behavior are the elements that determine the success of food businesses in today's competitive environment. This is particularly important in the case of food because of the wide range of products, the easy substitutability of individual products and the strong competitive pressure of producers (Kubicová, 2007). Marketers can through identifying and understanding these factors develop strategies and advertising campaigns more effectively to the customer needs and their way of thinking. Products will be more convenient for customers, which can subsequently increase their marketability (Rani, 2014).

Consumer neuro-science is a new field in marketing which aims at predicting the consumer behaviour and to obtain information about feelings and preferences based on the physiological changes. We can objectively reveal our inexplicable behaviour to which we are not able to answer using a questionnaire in the traditional market research. An accurate measurement enables marketers to compare the response during the research, such as the impact moments associated with a particular product or brand, how they react to different marketing stimuli (Horská et al., 2016.; Berčík et al., 2016a).

In the process of the adjustment of the retail environment, formed by important components which influence consumers, perception plays a significant role supported by all five sensory

organs. A prerequisite of adequate buying behavior is the detection of customer senses perception and an adaptation of visual merchandising in the retail environment. Consumers when buying products seek to meet their own needs, which companies are trying to follow up with creating proper conditions in the sales area. Among the features needed first to attract attention and then to select a product, is the position of the product on the shelf, the impact of music, colors, lighting and scents that directly affect the consumer emotions. Natural perception of music causes emotional response in humans, resulting from stimulations transmitted to the central nervous system (Berčík et al., 2016b).

There is no doubt that market research, trend observation and setting, food research and development, food innovation, marketing in a whole sense and food technology are to be debated and used for shaping the future of the food industry, food market, food consumption and food availability (Horská et al., 2012).

Quality, quantity and price level of goods and services which individuals and individual households procure depend on the level of income. The purchasing power of many households currently does not allow full satisfaction of demand for food and other essential estates. Saturation of demand for food and non-alcoholic beverages in the households of retired persons, based on Törnquist's hyperbolic function, can be estimated at the level of € 903.380 per person per year. Saturation borders of demand for food and non-alcoholic beverages in the households of self-employed persons are reduced to € 707.185 per year and in the households of employees to € 686.237 (Kubicová et al., 2013).

Last year total consumption of soft drinks in Slovak Republic increased by 12% in comparison to 2014. That means 140 liters of different kinds of drinks per capita. According to the Executive Director of the Association of Non-Alcoholic Drinks and Mineral Water in Slovak Republic, Lucie Morvai, most Slovaks consumed mineral and spring water (Morvai, 2015). Liquids containing beneficial biologically active substances such as juices and nectars nourish and strengthen our body (Mendelová et al., 2016; Vietoris et al., 2014). Drinks intended for human consumption, including drinking water and mineral water, should be safe in terms of microbiological, chemical, quality, and sensory aspects, and also appropriately packed and labeled.

Consumers also enjoy various types of tea and coffee. Mental performance increase belongs to one of the health benefits of consuming these beverages (Cheong et al., 2013). Coffee also prevents cardiovascular diseases, cancer and diabetes (Lim et al., 2012).

As the range of beverages in commercial chains is wide, the aim of the paper was to find out which drinks are preferred by consumers in Slovak Republic.

2. Data and Methods

Data base consisted primarily of realized analyses data obtained from a questionnaire from 200 respondents. The questionnaire was directly handed over by survey organizers to respondents in several Western Slovak Republic cities. The survey was conducted in February 2015. The questionnaire focused on determining dietary habits of consumers. Three questions in the questionnaire were classification ones (related to the age, sex, economic activity of respondents). These were questions for which we assumed the existence of a significant relation to that issue. Besides the primary data, we also worked with secondary data from the website of the Association of Non-Alcoholic Drinks and Mineral Water in Slovak Republic.

Data processing and subsequent analyses are performed in MS Excel and statistical software of SAS Enterprise Guide. The basic procedures of descriptive statistics (sorting, descriptive

characteristics, testing of statistical hypotheses) are used in the analyses. The Chi-Square Test of Independence is used to verify dependence. The condition of using the given test is that the frequency $n_{ij} > 5$. If this condition is not fulfilled, it is possible to draw the wrong conclusions. In this case, the Fisher's exact test can be used, which is part of the SAS Enterprise Guide output. Fisher's exact test is also known as the Freeman-Halton, which is described in more detail at: http://support.sas.com/documentation/cdl/en/proctstat/63963/HTML/default/viewer.htm#procstat_freq_a0000000561.htm. Conclusions of the hypotheses are based on the p-value that is part of the outputs in the tables (if p value $< \alpha$, then H_0 hypothesis reject). As part of the measurement of associations, we were also interested in the degree of associations between the examined characters. The intensity of the dependency can be measured by several statistics. Measures, on which our article is based, are part of the SAS Enterprise Guide output. They are as follows: Phi Coefficient, Contingency Coefficient, Cramer's V. The coefficients take the values from 0 to 1, wherein a high value indicates a high level of association. The association rates are also described in more detail in the next source: http://support.sas.com/documentation/cdl/en/proctstat/63963/HTML/default/viewer.htm#procstat_freq_a0000000561.htm

In the present paper we focus only on the part of the survey, i.e. questions related to the consumption of beverages and drinking habits of consumers. In connection with these questions, the following three hypotheses, which validity is verified in the paper, are set:

Hypothesis H1: Daily consumption of beverages is not influenced by the sex, the age or economic activity of the respondent.

Hypothesis H2: Daily consumption of beverages is sufficient (more than half of respondents drink more than 2 liters of beverages per day).

Hypothesis H3: There is a significant difference in the types of drinks according to the age, sex and economic activity of the respondent. We assume that younger respondents drink more sweetened drinks than the older ones. We also presume that women prefer healthier kinds of beverages, such as mineral water or drinking water, to sweetened drinks. We expect that from the viewpoint of the economic activity of respondents the retirees and the unemployed will prefer drinking water or tea.

3. Results and Discussion

Water is a prerequisite for the life of any organism. It is important for every chemical reaction in the human body, it transports nutrients, regulates body temperature, it is important for blood circulation, helps maintain proper cell function, is a carrier of minerals and trace elements. Water has an irreplaceable role in the life and body function. For proper functioning of the human body it is necessary to ensure the intake of fluids in the amount of 1.5 - 2.5 liters per day. Adequate fluid intake may be assured from multiple sources. From the nutritional point of view it is advisable to drink mainly drinking water, mineral water, herbal teas, 100% fruit and vegetable juices. Less suitable sources of water are black tea, water syrup, and fruit nectars. Nutritionists consider various aromatized sweetened soft drinks, alcoholic beverages (beer, wine, spirits), coffee to be inappropriate as well as milk, that does not belong to beverages.

Comparing the latest data published on the website of the Association of Non-Alcoholic Drinks and Mineral Water in Slovak Republic (Table 1), we can state that European consumers drank in terms of quantities per person in 2015 a total of 46.6 liters more non-alcoholic beverages than Slovak consumers and almost doubled the consumption of bottled water, juices and nectars compared to Slovak consumers. Compared to the EU average, the consumption of syrups (6.7 l per person in 2015) and non-alcoholic beverages (2.2 l per person in 2015) in Slovak Republic

is higher, which means that there is a high consumption of mainly sweetened beverages, which is less satisfactory from the nutritional point of view, since sugar, not only water, also gets to the body.

From the development point of view, consumption of beverages in the Slovak Republic decreased in 2015 compared to 2010, with the largest decline in consumption of fruit juices and nectars (decrease by 14%).

Table 1: Total consumption of soft drinks in SR and in EU (l.person⁻¹)

Drink	years	SR	EU	Index 2015/2010 in SR	Difference SR - EÚ
Total	2010	200.3	238.2	0.96	+37.9
	2015	192.4	239		+46.6
Bottled water	2010	66.5	102.4	0.98	+35.9
	2015	65.1	108.9		+43.8
Syrups	2010	25.3	16.1	0.89	-9.2
	2015	22.5	15.8		-6.7
Fruit and Vegetable Juices	2010	8.6	22.2	0.86	+13.6
	2015	7.4	19.1		+11.7
Non-alcoholic beverages	2010	99.8	97.5	0.98	-2.3
	2015	97.4	95.2		-2.2

Source: <http://www.nealkonapoje.sk/sk/nealko-v-cislach>, authors' calculations

Note:

Non-alcoholic beverages - carbonated sweetened drinks, non-carbonated sweetened drinks, (< 25 % of fruit juice), flavored mineral and spring water, ice tea, ice coffee, energy drinks, sports drinks

Syrups – concentrates, syrups, powdered drinks

Juices and nectares – 100 % fruit and vegetable juices, 25 - 99 % nectares

As further stated on the website of the Association of Soft Drinks and Mineral Water in Slovak Republic, the non-alcoholic beverage market includes a wide range of products from classic lemonades, cola drinks and flavored mineral or spring waters, fruit juices, nectars, ice tea to energy or sports drinks. The offer is diverse and non-alcoholic industry is trying constantly to bring innovations to meet the needs of the current consumer. These innovations include a variety of flavors, pack sizes, or a range of low or no energy drinks, which currently account for up to 30% of non-alcoholic beverages in many European markets. The European market today offers nearly 2,000 different brands of beverages, 9,000 different products, taking into account all the flavors and approximately 100,000 beverage options regarding various pack sizes and packaging materials.

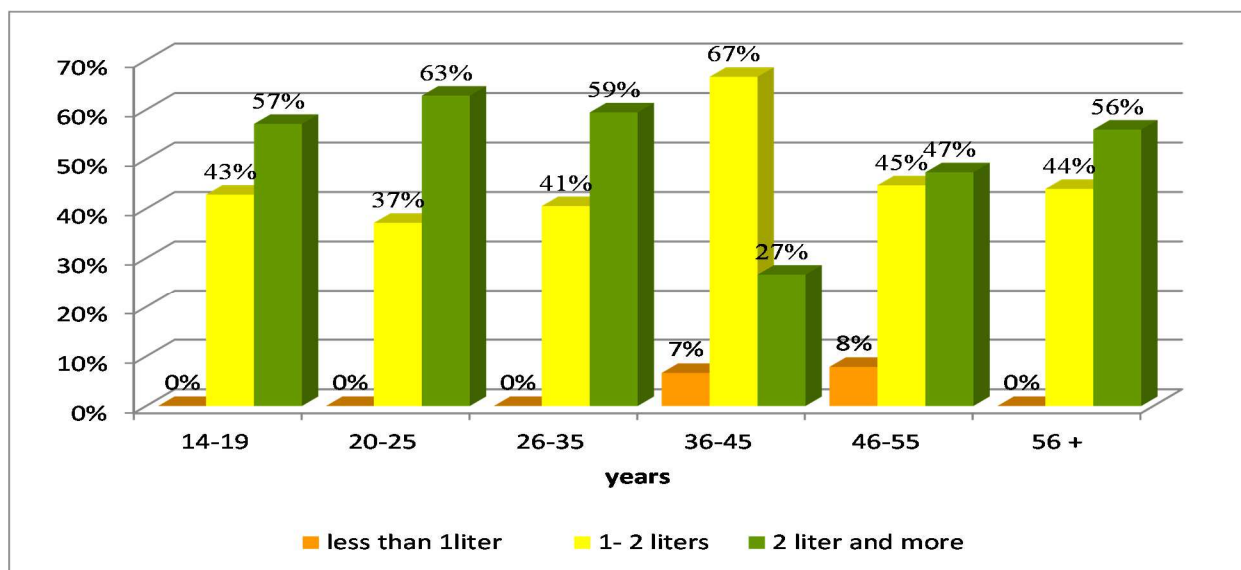
The behavior of Slovak consumers in the purchase of food was studied by several authors. Nagyová et al. (2012) examined the decisive factor for the consumer when buying food. Their research has shown that the quality of the product (freshness, taste) is the most important factor for consumers; the second factor is the past experience with the product. The product price ranks third in the order. Another factor is the country of origin, which serves as an indicator of product quality. The following reason is to avoid buying the food imported from some countries. Tothová a Fiľa (2014) examined consumer preferences, purchasing behavior and decision-making process of consumers who buy agricultural products directly from the farmer's yard. Both surveys agree that the respondents support the domestic economy and employment in Slovak Republic by buying Slovak products.

As has been said, the current market for non-alcoholic beverages is diverse. Consumers can choose drinks from a wide range. From the nutritional point of view, not every beverage is suitable for our body, so we were interested both in what kinds of drinks consumers prefer today and in the daily amount of fluids received, that means adherence to the recommended fluid intake $2 - 2.5 \text{ l per person}^{-1}$. For this reason, two of the questions posed to the respondents were focused on this issue. We were not only interested in the amount of fluids the consumer receives daily, but also in the preferred types of drinks. Answering the question about types of drinks, respondents could identify three kinds of preferred beverages.

The survey involved 47% of women and 54% of men. In terms of age structure, the group consisted of 18 % of respondents aged 14 - 19, 18% of the age group 20 - 25, followed by 19% of the age group 26 - 35 years, 15% of the age group 36 - 45 years, 19% of age range 46 - 55, and respondents aged 56 and over were represented by 13% share. The structure of respondents according to their economic activity was as follows: 35% students, 30% employed, 23% unemployed and 13% retirees.

The survey found that 52% of respondents, regardless of the age, drink daily two liters of fluid and more, 46% of respondents drink one to two liters of fluid per day and less than one liter is drunk only by 2% of respondents. Respondents of all ages most often said they drink two liters of fluid or more a day. The responses varied in the category of 36-45 year olds, where 67% of respondents drink only one to two liters of fluid a day (Fig.1).

Figure 1: Daily fluid consumption of respondents in relation to the age



Source: own survey

We subsequently verified the validity of the first determined hypothesis. The results of the statistical testing of the validity of this hypothesis are given in Table 2.

The results show that there is confirmed no statistically significant dependence in relation to any classification question. There is no statistically significant difference in terms of the amount of consumed fluid between men and women, between individual age and economic categories of respondents, i.e. the assumption of the hypothesis H1 has been confirmed. These conclusions have been proved also by low association values.

Table 2: The results of the statistical testing to the question: How much water (fluids) do you drink every day?

Statistic	<i>Gender</i>		<i>Age</i>		<i>Economic activity</i>	
	Value	Prob	Value	Prob	Value	Prob
Chi-Square	3.9658	0.1377	9.0579	0.1068	7.5791	0.2706
Fisher's Exact Test	0.1469		0.1073		0.2553	
Phi Coefficient	0.1408		0.2155		0.1947	
Contingency Coefficient	0.1394		0.2107		0.1911	
Cramer's V	0.1408		0.2155		0.1377	

Source: Own calculation in system SAS Enterprise 5.1

The hypothesis H2 is also related to the question. Since not only the professional public is talking relatively often about optimal fluid intake, we expected that consumers are well informed, i.e. we assumed that more than 50% of the interviewed respondents drink more than 2 l of drinks a day. However, the conclusion of the test on proportion with the known constant (p value = 0.713) showed that the proportion of "conscious" consumers is not more than 50%. It is necessary to appeal to people that receiving additional amounts of fluid is essential for their health.

We have also studied the kinds of preferred beverages. The respondents could mark three most preferred drinks in this question. The evaluation of the question by descriptive statistics is given in Table 3. Since respondents rated the most preferred beverages by 1, the lower mean value in the table indicates a better average beverage rating by the respondents.

Table 3: Descriptive statistics for Beverage preference

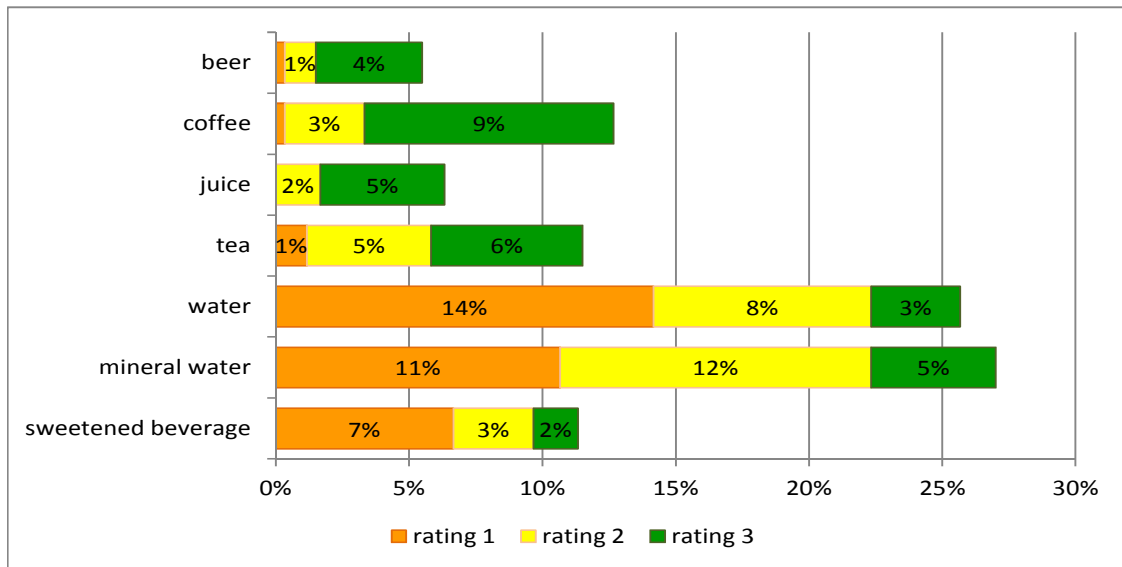
Analysis Variable : beverage								
Category	N Obs	Mean	Std Dev	Minimum	Maximum	Mode	Range	N
Beer	200	2.667	0.595	1	3	3	2	33
Coffee	200	2.711	0.512	1	3	3	2	76
Juice	200	2.737	0.446	2	3	3	1	38
Tea	200	2.391	0.669	1	3	3	2	69
Water	200	1.578	0.712	1	3	1	2	154
Mineral water	200	1.778	0.722	1	3	2	2	162
Sweetened beverage	200	1.559	0.741	1	3	1	2	68

Source: Own calculation in system SAS Enterprise 5.1

Note: Std Dev: Standard deviation

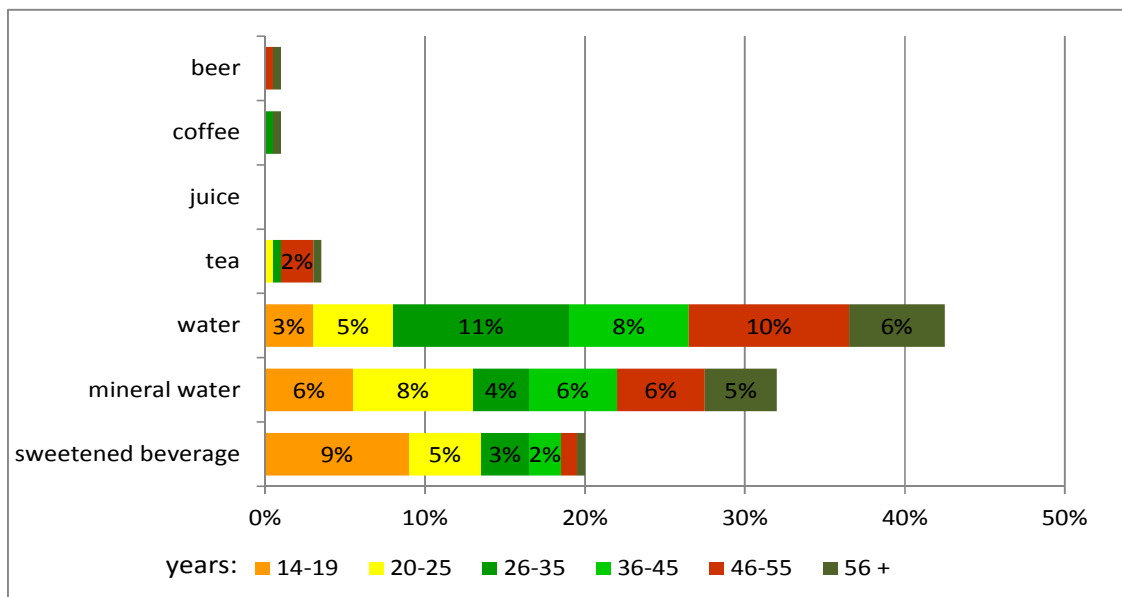
The table shows that the lowest average ratings, i.e. the most preferred drinks among consumers are sweetened drinks, drinking water and mineral water. When evaluating, it is necessary to consider not only the average ratings but also the number of respondents who have chosen the respective drink. From this perspective, mineral water (28%), drinking water (25%) and coffee (13%) were most commonly referred to. Coffee has 2% higher rating than sweetened beverages but sweetened beverages have been more frequently rated as the most preferred ones. This is also illustrated in Figure 2.

Figure 2: Beverage preference by category (rating 1 – the most preferred)



Source: own survey

Figure 3: Beverage preference by age (only rating 1)



Source: Own survey

When verifying the H3 hypothesis, we assumed that sex, age and economic activity would influence the selection of beverages. Based on Table 5, where the results are only presented for the most preferred beverages, we can say that the assumption was confirmed in terms of age and economic activity. The relationship between the most preferred drinks and the age is presented graphically (Figure 3), which shows that the younger respondents drink more sweetened drinks than the older respondents. A similar conclusion follows from the economic activity test. Sweetened drinks are preferred mainly by students (younger generations), the other categories (the employed, unemployed, and retired) more likely incline to mineral water and drinking water. We can talk about relatively strong dependence.

Table 4: The results of the statistical testing to the question on Beverage preference

Statistic	<i>Gender</i>		<i>Age</i>		<i>Economic activity</i>	
	Value	Prob	Value	Prob	Value	Prob
Chi-Square	7.1545	0.2094	57.8116	0.0002	48.3557	0.0000
Fisher's Exact Test	0.2218					
Phi Coefficient	0.1891		0.5376		0.4917	
Contingency Coefficient	0.1858		0.4735		0.4413	
Cramer's V	0.1891		0.2404		0.2839	

Source: Own calculation in system SAS Enterprise 5.1

4. Conclusion

Based on evaluating of the obtained information and data we can state that only the hypothesis regarding the relation between the selection of the most preferred beverages and age, respectively, economic activity was confirmed in the verification of the established assumptions. Consumers choosing from a wide range of drinks most often drink drinking water, mineral water. Sweetened beverages also belonged to the most preferred drinks which are represented in a wide range on the Slovak market. These drinks are consumed mainly by younger respondents. As stated by Kovács (2008), sweetened drinks should be avoided or consumed only exceptionally. This category includes various flavored, sweetened and cola drinks which often "displace" more valuable components of the diet, and, in some cases, an excessive intake of flavored, sweetened drinks can cause even qualitative starvation from low consumption of full food, for example proteins and micro-nutrients from milk. The thirst is well quenched by a beverage with a maximum sugar content of up to 2.5% but drinks with higher sugar content evoke the feeling of thirst.

Young people are advised to limit the intake of sweetened drinks because, as Cohen et al. (2010) claim, the reduced calorie intake and the increased physical activity are beneficial to the weight and health of consumers. In addition, beverages sweetened with artificial sweeteners, namely aspartames, increase the level of phenylalanine (Matejová et al., 2015) and are unsuitable for patients with phenylketonuria (Poustie & Wildgoose, 2010). The correct intake of drinking water or low mineralized spring water can be used for purifying the organism (Jedlička & Ailer, 2015), detoxifying it with a suitable supplement of plant products, fruits and vegetables and products made of them (Keresteš et al., 2011). The survey revealed that although the proportion of respondents who drink more than 2 liters of fluid is relatively high, it still represents only around 50%, which is insufficient (the problem of regular consuming drinks has been mainly noticed with the productive population aged 36-45). In accordance with the abovementioned, we also recommend to increase the population's awareness of the optimum amount and composition of their drinking habits from early years. It would be appropriate for the non-alcoholic beverage market to be in line with these recommendations.

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Innovative activity of agricultural enterprises of the Voronezh region

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Abstract

Strategy of development of Russia agribusiness is based on the development of innovative potential. In order to analyse the Innovative activity of agricultural enterprises of the Voronezh region we made the structured questionnaire and organized the interview with the heads of the major agricultural organizations. This article includes the brief characteristics of the agro-industrial complex of the Voronezh region, results of sociological research of the introduction of innovative technologies in agribusiness, review of the cooperation and collaboration of agricultural enterprises with agrarian Universities in the region and mechanism for promoting employment of graduates of agrarian Universities.

Keywords: agricultural economy, educational process, innovative activity, innovative technologies.

JEL Classification: O12, O13, O15, O32

1. Introduction

Agro industrial complex of the Voronezh region is represented by production of grains (wheat, rye, barley, corn), industrial and oilcrops (sugar beet, sunflower), livestock (cattle, pigs, sheep and poultry) and horticulture. Farming sector of the Voronezh region provides 13% of gross regional product. More than 15% of the region's working-age population is employed in agriculture, and more than 30% live in rural areas.

2. Data and Methods

In order to analyze innovative activity of agricultural enterprises in the Voronezh region, a questionnaire was developed and interviews were conducted with the heads of the largest agricultural enterprises in the region under study. The majority of agribusiness leaders agree that the most topical areas of innovative development are resource-saving technologies, precision farming, proficiency enhancement, creation of new generation products, introduction of integrated quality control and safety systems at all stages of production, transportation and storage.

During the last three years in the enterprises under study were introduced such technological innovations as purchasing of machinery and equipment, construction of new building spaces, introduction of new technologies and goods into production process, acquisition of software products. So, the representative of Voronezh pishche produkt in his interview noted that during the past period an elevator of up to 30 thousand tons was put into operation, which allowed the company to store grain at minimal costs and sell it at more favorable prices, to provide the livestock sector with its own concentrated feedstuff, and also provide grain storage services to external companies. As for the crop growing sector, technology No Till is used in grain production process. Thus, the applied technological innovations lead to significant increase of enterprise profitability. The Logus-Agro Group actively implements selective achievements in sugar beet production process, being not only a buyer of new hybrids of red

beet and sugar beet, but also an experimental site for crop variety testing together with the State Scientific Institution All-Russian Research Institute of Sugar Beet named after A.L. Mazlumov.

Among managerial innovations the greatest interest for agricultural producers represents the implementation of new forms of strategic alliances, partnerships and other forms of cooperation ties with consumers, suppliers, Russian and foreign manufacturers, as well as measures for staff development (development of corporate and / or individual training, units for staff training and proficiency enhancement) using both their own resources and the involvement of professionals from agrarian universities.

In the structure of total costs of the enterprises under study, the share of costs for new technologies, machinery and equipment ranges from 10% to 50%. All studied agricultural enterprises not only purchase innovative products approved by the market, but also act as a consumer of innovative developments, participate in joint innovative projects and conduct research and developments independently. And one of modern cooperation forms is the so-called technological platforms. In the Voronezh region functions the "Technological platform "Technologies of food and processing industry of agro industrial complex - healthy food"". Participants in this platform are 26 universities, 24 research institutes and more than 150 enterprises and companies.

The aims of the platform are:

- development of highly efficient technologies for production of agricultural goods as raw materials for new competitive food and feedstuffs;
- development of energy-saving equipment for food and processing industries of agroindustrial complex;
- development and implementation of an expertise and support system for integrated scientific projects aimed at creating safe food raw materials and food products;
- improvement of education process and human resource development in agro-food enterprises;
- improvement of legal and regulatory environment;
- integration of Russian research and development part of agroindustrial complex into the international scientific and innovation process.

All agricultural enterprises participating in our study have cooperation ties with agrarian universities in the Voronezh region, namely the Voronezh State Agrarian University, Voronezh State University of Engineering Technologies, Voronezh State University of Forestry and Technologies. Thus «MIVOK" signed a contract with the Voronezh State University of Engineering Technologies for development of high-protein feedstuffs with probiotic properties, and there is a contract with the Voronezh State Agrarian University for development of feedstuff properties and rations. The enterprise Eko Niva Agro within the framework of scholarship programs, realization of workshops and internship and graduate employability maintains cooperation ties with more than 13 Russian universities. Interest in the results of scientific research, their relevance and practical significance for the enterprises under study, as well as state support are the main conditions under which they will provide their own production facilities to the universities and research institutes for conducting experiments and approbation of scientific projects.

In general, enterprises want to get from scientists information about new technologies, crop varieties, animal breeds, fertilizers, feedstuff, etc.

Practice shows that the most optimal form of professional training realization, employment and adaptation of graduates is a relevant unit at the university that coordinates its interaction with

manufacturing enterprise which needs a young specialist (Career Development Center) (Table 1).

Table 1: Functioning mechanism of career development center

Methods of CDC (career development center) interaction with representatives of employing companies	Benefits of interaction for employers	Benefits of interaction for the university (for students)
Joint identification of personnel requirements in labor market.	Formation of the personnel reserve.	Exact knowledge of personnel requirements.
Joint formulation of requirements, qualification profile and development of occupational standards on their basis.	Getting a specialist with necessary knowledge.	Adjustment of training programs to meet the needs of labor market.
Joint participation in scientific conferences, seminars.	Full information about labor market (demand, supply). Opportunity to monitor promising students, create a personnel reserve.	Full information about labor market (demand, supply). "First-hand" information about occupational requirements of employers. The opportunity to find a job during training.
Identification of problem areas in enterprises and defining themes for course and degree work in accordance with identified problems	"Fresh look" at solving enterprise problems.	Opportunity for students to assess the practical effect of received knowledge.
Implementation of workshops and internships for students.	Opportunity to choose promising students, to conduct training according to specific factors of the enterprise, to create a personnel reserve.	Opportunity to acquire practical skills in the specialty. Assessing your capabilities.
Participation of employers in the commissions at degree work defense.	Opportunity to choose the best specialists for the enterprise.	Opportunity to show your knowledge and prove yourself as a promising specialist.
Employment of students at enterprises	Guarantee of getting a promising employee.	Guarantee of advanced employment.
Monitoring of graduates career on the basis of employers' information.	Opportunity to express critics and wishes on the adjustment of training programs.	Opportunity for the university to adjust training process in accordance with the needs of enterprises.

3. Results and Discussion

In the structure of total costs of the enterprises under study, the share of costs for new technologies, machinery and equipment ranges from 10% to 50%. All studied agricultural enterprises not only purchase innovative products approved by the market, but also act as a consumer of innovative developments, participate in joint innovative projects and conduct research and developments independently. In general, enterprises want to get from scientists information about new technologies, crop varieties, animal breeds, fertilizers, feedstuff, etc. Among managerial innovations the greatest interest for agricultural producers represents the implementation of new forms of strategic alliances, partnerships and other forms of cooperation ties with consumers, suppliers

4. Conclusion

In conclusion it can be concluded that the effective interaction of universities and agricultural enterprises include : the exchange of information on production technologies, sharing of research results, joint use of buildings, structures, transport infrastructure, information databases, joint training programmers or qualification.

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Innovation in Agrifood SMEs: a case study from Slovak Republic

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Abstract

The contemporary state of innovations in agrifood sector in Slovak Republic is strongly influenced by the process of post-socialist transformation. The submitted paper identifies and describes the biggest problems, barriers and challenges regarding innovation-driven entrepreneurship that agrifood SMEs are facing today. The interpretation is particularly based on data and information conducted by the pilot questionnaire survey of selected companies and individual interviews with their representatives performed in 2015. The authors are especially concerned about the innovation strategies and planning as well as innovation sources and ideas of the Slovak agrifood SMEs.

Keywords: innovation, agrifood sector, innovation potential, innovation strategies, agrifood SMEs

JEL Classification: O30, O32

1. Introduction

The field of innovation is generally recognized as one of important drivers of successful entrepreneurship in contemporary economic and societal environment. It represents also a fundamental challenge for the European agriculture and food industry, involving not only technical or technological approaches, but also strategy, marketing, organisation and design. In fact, innovation results from different forms of “entrepreneurial” thinking and doing things, as well as recombining existing knowledge in an innovative way. Innovation is about solving problems and taking advantage of opportunities, and is characterised by a combination of technical, economic, organisational and external drivers. Innovation takes place when the network involved in the production changes how they do things, which suggests innovation entails the patterns of interactions between people, tools and resources. Moreover, a learning process is also associated to innovation processes, as changes which result in improvements in social or economic organisation, also increases the available knowledge. (Klerkx & Gildemacher, 2012) Innovation is therefore not restricted to new practices or behaviours or new products only, it is also about improving and upgrading the existing ways of “doing something” or about new processes and thus about “doing old things in a new way”. The innovative approach to sustainable agriculture is an interactive process involving multiple stakeholders and different source of knowledge and information. According to The Innovation Policy Platform “innovation in the agricultural sector involves the development of healthier, safer and more nutritious food for human and animal consumption, new breeding techniques, and fuel for industrial use. Agricultural innovation has the potential to increase the productivity and adaptability of crops, diversify the variety of agricultural crops, enhance the nutritional value of food, feed increasing farm animal populations, and provide fuel for a growing range of industrial uses without depleting available land, water and biodiversity resources.” (Innovation Policy Platform)

The typical innovation is based on the investment in scientific research realized at universities or research institutions and on the number of patents. It is often associated only with high-tech

products and research and development activities mostly carried in urban areas. Innovations in agrifood sector are rather young policy issues, they have become an important objective of national and regional development policies. They face new challenges, including climate change, impacts of financial and economic crisis as well as energy crisis. Innovation includes a wide range of different actors which have different interests and objectives and belong both to the public and private sector. While most of the research activities are carried out by mostly public funded research institutions and projects, it seems extremely important to develop effective and efficient methods that would lead to innovation driven research. Compared to science driven research, innovation driven research is much more practical in terms of empowering potential innovators themselves, farmers and small business owners. Although innovation is related to business and scientific activities, other actors like governments and civil society should also actively play an important role in facilitating and advocating the process. (Moravčíková & Adamičková, 2014)

1.1 Methodological framework for assessing innovations in the Slovak agrifood SMEs

According to the Statistical Office of the Slovak Republic, the share of agriculture in GDP declines to 3% and in food industry to 1.7% in 2014. The share of agriculture and food industry in total employment is also reduced to 2.4% and 1.8% in the same year. In 2015 (according to the Green Report 2016), the share of agriculture in the economy of the Slovak Republic increased a little bit in relation to intermediate consumption and employment and decreased in relation to average wages. Slovak Republic has a different agrarian structure from the other EU member states, in terms of larger average size of enterprises, particularly large-scale character and prevalence of rented land as well as low level of diversification into non-agricultural activities.

In general, the situation in the field of agrifood SMEs demand for innovation in Slovak Republic could be characterized as insufficient, non-motivating and not well informed. The food industry is also weakly interconnected with research and development institutions (and their findings) that negatively influences its innovation abilities and production of health foods. Moreover, the innovation awareness of agrifood companies is very low and indistinctive. The agriculture and food industry is strongly influenced by the aging phenomenon and low quality of human potential, insufficient willingness to cooperate and insufficient ability to absorb new knowledge and to innovate.

The working group Innovation and Technology Transfer (EU Strategy for the Danube Region) identified concrete barriers in the EUSDR countries (Loeffler, Höptner&Chiran, 2013):

- SMEs underestimate the potential of innovation;
- companies are afraid to participate in R&D projects;
- low exploitation through SMEs;
- lack of common links between university-research-innovation-business environment;
- (no) trust in collaboration;
- (no) common methodology/data basis;
- different language (business vs. academic);
- lack of communication and understanding;
- pressure of big companies on research transfer to market;
- separation between R&D entities and private companies;
- lack of central point of dissemination and contact for R&D facilities;
- no national business centres network committed to innovative activities;
- destroyed agricultural sector;

- projects are not fitting to market needs;
- bad communication of authorities;
- lack of clear rules and practices;
- unclear/non favourable regulations of Private-Public Partnerships;
- lack of standards;
- lack of facilities for innovation oriented companies or technology companies.

Several innovation audits and analyses of innovation demands realized in Slovak Republic points out these main findings and conclusions (Fáziková & Mariš, 2010; Balog et al., 2013):

- Majority of agricultural companies consider innovations as a very important issue in their strategical management, but they face a huge problems (financial, material, human) during the implementation process.
- Innovations are usually represented by the adaptation of external ideas to internal conditions (particularly SMEs which do not have their own development capacities).
- Most agrifood companies is not well prepared for technology transfer and cooperation with universities and R&D institutions.
- The instruments for external support of innovation activities are mostly used for improving the infrastructure of enterprises.

There is, generally, a lack of understanding of the specificities of innovation processes in agrifood sector. The present case study tries to fill the gap by focusing on the agrifood SMEs.

2. Data and Methods

Conducted pilot innovation audit consisted of two methods. The first one was a questionnaire survey carried out by electronic questioning, within which individual subjects were directly addressed through two calls to ensure a higher response rate. Already during the process of creating the questionnaire, the need to simplify the formulation of the questionnaire occurred - in order to make it easy to understand for all subjects, whether farmers or food makers. The aim was to achieve that after the first look at the questionnaire respondents are not discourage to fill it because of excessive complexity and expertise, but to make respondents sense the opportunities that may exist in the case of cooperation with the university and its transfer centres.

The realization of the pilot questionnaire survey was preceded by the selection of individual SMEs, which were included in the analysis. Thorough identification of potential innovative representatives of the business sector in the field of agriculture is important from a balanced representation of demand for innovation point of view. Another important step was the segmentation of selected businesses, thus not only the identification of individual SMEs but also identification of enterprise groups according to various characteristics. When segmenting SMEs, the following aspects were taken into account:

- Geographical coverage - sample should not be distorted by the fact enterprises are from one region that has for example the same soil and climatic conditions. Therefore, companies from different parts of Slovak Republic were chosen for the analysis.
- Size of the enterprise - SMEs were the main subject of the analysis, with regard to the number of employees to 250, in accordance with definition of the EU.
- Sector - selected were enterprises from the agricultural sector with a focus on relevant applied research, according to the topics of newly established Research Centre AgroBioTech, particularly in the areas of agriculture and food industry.

- Willingness to participate in the survey - in the case of SMEs, there is often reluctance to participate in similar surveys and analyses. This is especially the case in the agricultural sector, mainly as a result of carrying out the survey in the summer, when the harvest takes place and work intensity is very high. Therefore, an important role had also motivation of entrepreneurs to participate in the analysis by explaining the benefits and future benefits that participation in the survey can bring.

Although the sampling procedure implemented above mentioned principles, it was not representative sample.

When approaching companies for pilot survey, we created the database of 205 agricultural companies and 125 food enterprises using sources as Slovak Agriculture and Food Chamber (SPPK), Agroportal.sk, Agroregister of the SR, catalogues and other information portals. The pilot questionnaire survey was conducted by means of electronic questioning, within which individual subjects were addressed directly during the months of July and August 2015. Altogether, 35 enterprises participated in the research. In terms of size, mainly small enterprises employing up to 50 people participated in the survey. 82% of the participants were agricultural enterprise. Legal form of enterprises were primarily the cooperatives, mainly focusing on crop and livestock production, processing of milk, meat, services in agriculture, precision farming, or the operation of the biogas plant. Data from the pilot survey were analysed only with simple statistics. Specific statistical methods are going to be applied in further period of ongoing survey.

The second method utilized in pilot innovation audit were personal interviews with selected enterprises in order to map their innovation needs and innovative potential. Selected were entities that can be considered as innovative representatives of the business sector with high potential for possible future cooperation.

3. Results and Discussion

3.1 Innovation strategies and planning

Innovation strategy of the company should be an integral part of the overall strategy and should include all the innovation objectives leading to improvement of competitive position. Additionally, it should deal with removal of the identified critical spots, take advantage of identified opportunities and innovation trends. Company considering the innovation should have it already enshrined in its objectives, eventually in the vision and while planning innovation, company has to use its market knowledge, identified opportunities and realize its strengths and weaknesses.

The first and the most important result is that all surveyed companies somehow consider themselves to be innovative. Only two of all respondents indicated that they consider their company as innovative only partially. In addition, 100% of companies consider innovation as an important element in terms of their competitiveness and 91% of companies also states that innovations are part of their objectives. The perception of innovation as an important element in individual companies proves also the answer to the question whether the companies have developed their own innovation strategy. Also in this case, nearly 55% of companies responded positively. These responses create favourable assumptions for the future cooperation with university transfer centres, as the most perspective subjects of economic practice are the companies that are interested in innovations and also implement them on their own.

The answers of the surveyed companies shows that SMEs in most cases fail to implement their own development, which in its essence is not necessary for these types of companies, often

because it is a costly activity and there are other ways how to get the results of development, which in turn could be applied in companies activities. The role of the university centre when transferring the results of research and development then acquire additional justification.

The other two questions were open-ended and so the companies have the opportunity to indicate on what specific topics in the field of innovation they are interested in, what their planned activities are with regard to innovation, or what problems could innovations help them with. Based on the answers, companies are primarily interested in innovation of new products and production processes, technologies of new products, technology of soil processing, in the area of thrift processes to environment, modernization and establishment of new cattle breeding, modernization of livestock production objects, mechanization equipment of plant production, development of soil bacterial spectrum under the slogan "Take care of the land, and it will take care of you." In addition, innovation companies should allow the companies to solve the problems associated with accurate and targeted application of organic nutrients in the 3D profile of the soil, the soil-water storage, the homogeneity of nutrients and organisms in the soil, with the technology of housing, milking and feeding the cattle and so on.

3.2 Innovation sources and ideas

The knowledge rate of innovation needs and innovation opportunities are one of the essential characteristics that can help to evaluate innovation potential of the company. In general, the potential for innovation exists in every company. However, the existence of the innovation process in a company itself is not an automatic guarantee of using the new ideas. For the effective use and development potential in terms of innovation, it is necessary to use such new ideas and to create a fertile innovation environment. Innovation process in a globalized environment should work on the principles of mutual interaction with different partners. Slovak Republic is a small export-oriented economy, what increases the need of orientating the companies outside regional or national sources. Cooperation in innovation field is usually one of the main preconditions for long-term success and also stimulates further demand for innovation.

The most natural source of information are primarily own employees of the company. An enterprise should use their creativity and inventive thinking. Other important sources of information for innovation, especially from outside the company, are the analysis of competition, the information from suppliers and other partners, or customers. Important actors of innovation processes within companies are continually universities, eventually research and development organizations, mainly due to the application of the knowledge triangle. Especially the exchange of information between these actors enhances knowledge and technology transfer, allows to create long-term partnerships and opportunities, and is driving force for innovations. These resources may overlap and potential for innovation can be simultaneously in multiple sources. Particular importance is the company's ability to work with the obtained information and evaluate them rationally. The enterprise should be additionally able to constantly look for new sources of information and transfer centres of knowledge and technology offer a large space for this. In this part of the questionnaire, the emphasis was placed on sources of information and inspiration for innovation activities, where businesses could choose multiple answers from the following options: internal resources, suppliers, customers, competitors, advisory and consultancy companies, universities, research and development organizations and membership in professional associations. Almost 73% of companies that participated in the survey indicated that the ideas are mainly drawn from their own employees or the ideas are generated within its own management. Thus, the most commonly used are internal resources of the company, which is the most natural and often the most accessible source of information.

The second most common source of information for companies are suppliers of inputs and technologies, as well as competition. In responses, both of these options were listed four times (i.e. 36% of companies).

Company that does not use the communication with partners in the innovation process, probably protects all the information as its know-how, or does not have a need to solve their problems in cooperation with partners. On the contrary, companies that use partners as an important source of information, have the greatest conditions for successful involvement into the collaborative process of technology transfer. Food companies also labelled customers as an important source of information. Among the less frequently used sources of the ideas belongs R&D organizations. Within all possibilities offered in the questionnaire, only a very small percentage (less than 20%) indicate universities as a source of information for innovation activities. Since the transfer centre will mediate cooperation, in particular with universities, it will be important to convince entrepreneurs that universities are a good source of ideas and there will be need to change the awareness of university research and development, in particular through high quality services, providing solutions applicable in practice.

One of the main requirements in terms of smart specialization is the focus on strategic decisions outside its own internal company boundaries. This means that it is necessary to identify external opportunities in terms of innovation, to look for examples from which lessons can be learned or to identify links of knowledge with various partners and thus boost further cooperation. This is particularly important in the case of limited know-how and technology within the company where knowledge and technology transfer can play an interesting role. Currently, transfer of knowledge is largely based on created/existing informal and personal ties. These ties need to be strengthened, to support their development and to systematize them. An important aspect in this regard may be just intense and purposeful collaboration with university or other research and development organizations. In regards to cooperation with partners in innovation activities, the vast majority of respondents consider this as a very important aspect of its activities. 82% of respondents stated that maintain contact with partners through competent workers who registered suggestions and ideas of the partners. The rest of companies (18%) which responded to this question indicated that communication with partners is one of the most important sources of information for them. This result confirms that the innovation process in agricultural companies is an interactive matter and a large number of problems will be solved thanks to collaboration with other subjects.

The use of intermediary services is particularly advantageous from the point of view that these are mostly experienced and established actors, who have built a better position in communications with public authorities and external partners, and can bring a different perspective in the innovation process that comes from cooperation with many subjects. In the case of positive response, it is possible to assume that companies are trying to effectively use the knowledge, creativity and experience of other subjects, external consultants, and practitioners. Other areas of cooperation are experiences with knowledge and technology transfer, or the use the services of intermediaries to obtain the information necessary for the smooth running of the innovation process. In the case of cooperation with research and development organizations in the technology transfer 36% of companies indicated they have experience with such form of cooperation. In addition, 82% of companies said they use the services of intermediaries, mainly consulting companies. Therefore, it is mainly about consulting services and services related to engagement in projects. The reason is that these types of services are currently available for companies also in financial terms.

The other questions dealt with areas of cooperation with universities, research and development organizations, institute of SAS, clusters, innovation associations and networks, etc. Innovation process is an interactive affair. Participation in joint projects, associations, networks, clusters, and others can represent another important source of information that could be transformed into the innovations. Moreover, a finding, with which subjects and in what areas the surveyed companies would like to cooperate in the future, will help to identify the needs of individual partners and create successful mutual links between companies. Cooperation with other entities in innovation activities has now become an important element in the development of the company and its long-term success. In the question related to cooperation with various types of subjects, respondents could choose all the subjects with which they collaborated in the past. Based on the survey results, companies most frequently collaborate with research and development organizations. In their replies it was labelled by almost 64% of companies. In particular, this cooperation is done with National agricultural and food centre and with each of its integral part (research institutes) in the field of research findings in their own activities. Furthermore, despite the fact that businesses that actively participated in the survey, do not extensively used universities as a source of information for their innovation, in the question dealing with cooperation with the various types of subjects, universities were represented in 36% of responses. Mentioned were not only Slovak universities, but also foreign universities. As respondents said, it is primarily the cooperation on various projects. When taking into account the international dimension of cooperation, companies also reported international partnerships and networks to a lesser extent (about 18% of responses). Other types of subjects were not selected by any company. This means that any surveyed company has ever cooperated with clusters and innovation associations and networks. Consequently, there is the opportunity in the future to establish cluster in the area of agriculture, which yet does not exist in Slovak Republic. In addition, two of all companies did not name any of the offered subjects, and thus they do not use cooperation in their innovation activities.

Besides the real cooperation, the questionnaire also investigated the subjects of desirable cooperation, thus with whom the companies would like to be approached in the future. The most frequently represented in the responses had research and development institutions (55% of respondents), followed by transfer centres (36% of responses) and competition and other companies in the industry (27% response rate). Only a very small presence in the answers of respondents (10%) had universities, advisory and consultancy companies, technology parks and incubators, suppliers and customers. The only thing that did not occur in responses at all, are training centres and companies from other sectors. This means that while companies do not yet consider cross-cutting collaboration with other sectors - although this form of cooperation, according to foreign models is currently becoming very advantageous for companies particularly in the area of development and innovation. As businesses had the possibility to add other subjects (besides those in questionnaire) they mentioned also the idea that they are willing to embark on cooperation with anyone who will bring interesting idea and innovation. This means that it does not matter what the subject it is, the important is a good idea that can be transferred into practical solution.

4. Conclusion

Based on the results obtained from the first two themes of the survey, it is possible to divide companies into three groups:

Group A includes companies that are innovative and also collaborate with various subjects when developing their innovations.

Group B includes companies that are innovative, but so far do not cooperate with other subjects. Despite that, they have an interest in cooperation.

Group C includes companies which have no current interest in cooperation, respectively they do not show interest in innovation.

For university transfer centre it is now crucial to focus on the first two groups of companies. It is essential that these companies are innovative and interested in cooperation in the field of innovation. Such companies are currently the most perspective from the point of view of cooperation with transfer centre and in terms of the effective use of its services. In the future, the group C may be interesting as well, as these can be companies about which we currently do not know a lot since they did not participated in the questionnaire survey, but in later stages will be necessary to search for such companies and work with them. It is essential, however, to apply individual approach for individual groups, taking into account both - their specific and individual needs.

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The Impact of Marketing on Investor's response in IPO Market Evidence from Syria

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Abstract

Financial primary market is similar to other markets in achieving corporate objectives in accessing to finance for projects, as well as satisfying the desires of investors in obtaining attractive returns for their investments. Therefore, it is necessary to use marketing tools by issuer companies and issue managers to sell all issued securities.

The purpose of this paper is to examine the impact of each of marketing mix elements presented by product, pricing, distribution and promotion on the investor's response in Syrian initial public offerings (IPO's) market, questioners were distributed to a sample of 270 respondents which provided adequate information on the opinions of investors in Damascus stocks exchange. The results of the analysis showed that the investor's response is affected by the IPO's promotion strategies at first, secondly by pricing strategies, and there is no effect of product and distribution strategies. On order to improve IPO's market and to play true role in Syrian economy several recommendations have been presented by the end of study.

Keywords: IPO's marketing, primary market, Marketing mix, securities

JEL Classification: G10, G24, M31

1. Introduction

Financial markets or stocks exchanges play a crucial role in modern economy as an important part of the financial system, as they provide good opportunities to individuals who are looking for increasing income, in the same time funds to firms' operations, and providing funds for government projects. The funding by financial markets has become the most common means comparing with other means by financial intermediaries. Without financial market it would be difficult to meet borrowers (saving surpluses) and lenders (investment opportunities), subsequently through these functions, financial markets contribute to the efficiency of capital allocation, production and consumption. So the good established markets lead to the welfare of all societies. In contrast, the crises and shocks in the markets lead to serious and disastrous economic effects (Mishkin, 2004)

Financial market is a market where securities are issued and traded (Jakob et al, 2009, p65). In other words, it is a context where the suppliers and demanders of securities interact financially regardless of the spatial space (Gitman & Joehnk, 2008), and they are basically classified to primary and secondary markets. While the securities are sold in primary market for the first time, the secondary market is concerned with post-issuance transactions ((DG EAC, 2010, p14). Therefore corporations can get long run funds in the primary market by initial public offering

(IPO) process, which is related to the creation of new securities when the company is established or when it goes public and when it increases its capital after being listed in the secondary market. (Ross et al,2008)

IPO's play an influential economic role, representing investment flows through the market. According to World Federation of Exchanges (WFE), during 2016 the total value of newly established shares was approximately US \$ 142.5 billion and the total value of shares for the purpose of capital increasing of the listed companies was US \$ 672.3 billion. While the total value of bonds issued was about US \$ 4.327 trillion, 1,349 firms had issued new shares during the year (WEF,2016). However the IPO process provides several advantages for company, the cash flows are increased to give more opportunities of business expansion, in the same time, the IPO can expand the company's open acknowledgment and perceive ability in the financial society and that may lead to capital cost decreasing in the future...

Although the financial markets differ from the product markets in some characteristics, they share the main fundamentals such as the existence of a product, relationship between the seller and the buyer, the need for information, and the costs incurred (Filatotchev et al, 2016). So new shares issuing in stocks exchange is similar to the introduction of a new product in the products markets. In order to ensure the success of the initial public offering, the company needs marketing activities to achieve its objectives of selling all the new shares, and to take advantage of this decision.

Luo (2008) showed that all IPO's research have been studied in the finance literature, while there is no research from marketing perspective, and "marketing-finance interface" can be an appropriate approach of shareholders' value creation, and concluded that marketing efforts measured by re-IPO marketing spending effect on investor response within customer equity theory and market-based assets theory formwork, Bahadir et al (2015) focused on marketing applications at early stage stakeholders. He pointed to the ability of the issuer company to attract both of the underwriter and the institutional investors according to cue utilization theory, founded that underwriter depend on intrinsic cues to assess IPO attractiveness, while institutional investors depend on extrinsic cues. On the other hand Demers and Lewellen (2002) analyzed the marketing impact of IPOs, and found that the media attention alongside within creasing of IPO price in the securities market lead to increase in product market performance for internet companies in USA. Furthermore, Cook et al (2006) proved that the issuing manager has motivations to attract the individual sentiment of investors by publicity about the IPO to achieve the objectives of both the investment bank and the issuer.

In the same context, this paper attempts to determine the marketing role in the IPO process, particularly the role of basic marketing mix strategies in investors' demand for issued shares in the Syrian market in the Medial East region. Such research is rare in developing countries in general and especially in the Middle East, in the sense that it raises the question if marketing functions were exercised during the IPO process, and if yes, then which ones were affected more in the response of investors?

1.1 IPO process

IPO process involves several steps, first, when the issuer company makes a decision to issue new shares, and then choose an issuing manager. In general investment banks are responsible for this task, except when the task is entrusted to brokerage firms in the absence of investment banks. Hiring a reputable investment bank is a very sensitive issue and has impact at IPO success and the future return of new shares in the secondary market (Guner et al,2000), (Ertuna et al, 2003), (Kenourgios et al, 2007) and (Yip et al,2009). In contrast, the investment bank also

seeks to manage and market reputable companies, issuing to maintain its reputation and to increase its ability to contract with other companies in the future (Basdeo et al, 2006), a syndicate of the leader investment bank and several other banks is usually formed to complete the issuance process.

The second step is related with legal procedures in securities market authority (commission) that regulate IPO's market. The company must provide a set of documents to the commission attached to the request for issuance, the commission audit and accept a prospectus, in order to protect investors and provide all possible and necessary information to make their decisions (SCFMS,2006).The prospectus is a booklet containing a detailed information package for the issuance like the use of proceeds from the issuance, information of the management team and economic feasibility (Arkebauer& Schultz, 1999)

The final step of IPO starts when the new shares become available for public in the market and the potential investors begin subscribing in the quantities they want from the stock during the limited period, then the allocation process begins after the end of the subscribing, together with the announcement of the IPO success called "tombstone".

1.2 IPO marketing Mix

The marketing activities are linked to steps of IPO process, the 4Ps mix of IPO can be explained briefly as following.

1.2.1 IPO product

The IPO decision is a part of going public strategic decision, so the ownership base is expanded by new stocks. The stock as a financial instrument has some special characteristics to distinguish it from other products, such as homogenization and elasticity of liquefaction, and classified to several types based on the rights of the holder (Rose & Marquis,2006), Moreover, the stock has a life cycle as products include five stages: issuance, subscribing, listing, trading and end of life by liquidation of the company, acquisition and merger or treasury shares operations. (Mousa, 2011).

1.2.2 IPO pricing

The price of IPO is determined by discussing between the company and the underwriter. Nowadays book building is the most common method of IPO pricing, where the investors ask share amounts within a price range, and IPO price is determined after the book closing, taking into account the sale of all issued shares (Jenkinson& Jones,2009).

Many literatures tried to explain the underpricing phenomena which is a price increasing above of offer price in the first day of listing after IPO, it is like losses for company called "left money on the table" (Saboo&Grewal, 2013). The rise in price is defined as compensation of investors for the risk of uncertainty associated with purchase decision of IPO's (Luo, 2008).

1.2.3 IPO promotion

The company and the underwriter promote for IPO in many ways, since the IPO has been advertised from the very first moment of company decision. So advertising intensity before IPO lead to return increasing in the first day of listing and during the first year (Dumrongwong,2013).On the another hand, the company and the underwriter start a road show which aims to attract institutional investors as well as to know their view son the issue, therefore it later helps to determine the price.(Bahadir et al,2015).Additionally, financial public relations (FPR) is used to show the advantages of an IPO and the investment into the company. Generally FPR activities target financial analysts, financial media and investors (Tosun, 2004), not to

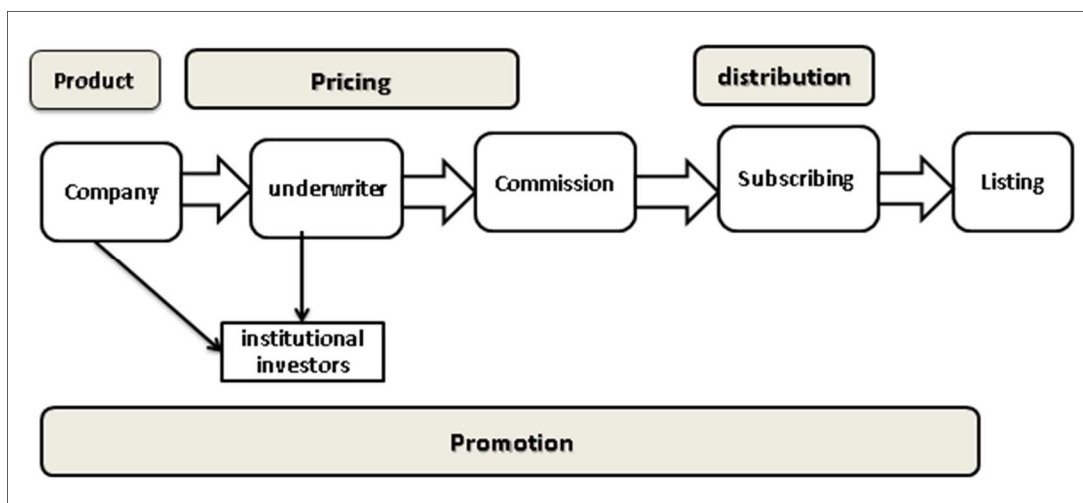
mention that the prospectus itself is one of the means of promotion due to the information contained therein.

1.2.4 IPO distribution

The investors get the issued shares by sale groups which are specialized in connection with investors and they are appointed by the main underwriting and other investment banks (Gittman&Joehnk, 2008).

In summary, the marketing application can be affected in IPO quality, based on their direct relation with the steps of the IPO process as well as their interaction with all IPO parties, the figure 1 suggested by researcher involves the steps of IPO and the accompanying marketing mix elements.

Figure 1: IPO steps and marketing mix



2. Data and Methods

Syrian IPO's market has seen significant developments after 2000 on both the practice level as well as the regulatory and legal level. Syrian commission on financial market and securities SCFMS is responsible for regulating primary and secondary financial markets.

The target population of this study is all shareholders of Syrian corporations that issued new stocks by IPO's over the period (2003-2009), knowing that the IPOs have stopped completely after 2011 because of the war crisis. The number of companies in the sample is 21 companies as Appendix 1 show, the total value of IPOs in period under study is US \$ 342 million equal to 35% of total capital, as well the coverage ratio or oversubscription rate is between 100% and 988%.

The primary data have been adopted in concern with the paper's aim to acknowledge the role of marketing mix elements in investors' demand for IPO, and questionnaires from a sample size of 270 respondents were used to calculate data including individual investors.

The questionnaire involves two parts, the first part is about for personal information of the respondents, and the second for questions of IPO's marketing mix divided to 20 questions depending on Fifth Likert Scale. Also the validity and reliability of the questionnaire were tested.

Statistical Package for Social Science (SPSS) Version 20 software by IBM is used to data analysis and to infer the relationship between the variables. We used some descriptive statistics

and multiple regression analysis to answer research questions by definition which IPO marketing mix elements have most and least impact on investors' response.

3. Results and Discussion

3.1 Sample criteria analysis

60 percent of the respondents were male versus 40 percent are female. Most of respondent surveyed about 73 percent are in the age group of 25- 35 followed by 11 percent in the 35-45 age group, while 9 percent are above 45 years. About 58 percent of the respondent were freelancers, 34 percent were employees. The last were retirees and students groups who were 4 percent each. In terms of educational background, about 53 percent of respondents had bachelor's degree, 37 percent had master degree followed by about 7 percent who had high school certificate, and finally only about 3 percent of the respondents had PhD degree. More than half of the respondents (56 percent) had 6-10 years of investment experience, 28 percent had 1-5 years of experience, 12 percent had 11-15 years of experience, and 4 percent of the respondents had more than 15 years of investment experience. The table 3-1 presents the results of criteria of respondents' sample analysis.

Table 3.1: Criteria of respondents' sample

Gender	Male	Female			N
Percentage	60%	40%			270
Age	Less than 25	25-35	35-45	More than 45	
Percentage	6%	73%	11%	10%	
work	employee	freelancers	student	retirees	
Percentage	34%	58%	4%	4%	
Education	High school	bachelor's	Master	PhD	
Percentage	7%	53%	37%	3%	
Experience	1-5 years	6-10 years	11-15 years	More than 15 years	
Percentage	28%	56%	12%	4%	

Source: SPSS results

These results show the nature of the investment environment in Syria, Syrian experience is relatively new in financial markets, which is reflected by the age and investment experience of investors.

3.2 Descriptive statistics

In order to demonstrate the importance of each of the variables studied, the mean and the standard deviation of each variable were calculated as in table 3.2

Table 3.2: Descriptive statistics

Variable	N	mean	standard deviation	important
Product	270	3.7111	.91485	High
Pricing	270	4.2222	.46875	High

Promotion	270	4.1000	.70392	High
Distribution	270	3.2333	1.01727	Medium

Source: SPSS results

All variables except the fourth (distribution), have high important means (≥ 3.5), also the values of the means lay between 3.2 and 4.2 which refers to converging in terms of importance and indicates the similarities of the views of the sample on the variables influence. At the same time, standard deviation values indicate that respondents' answers are not dispersed.

3.3 Multiple regression analysis

In order to determine the variables affecting the response of investors within the four components of the marketing mix, multiple regression analysis was applied using a stepwise method to exclude the non-effected variables, the results are presented in table 3.3 as following:

Table 3.3: Multiple regression analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
.880a	.774	.729	.00739	17.110	.001a
(Constant)	1.407	T	Sig		
Pricing	.453	-5.822	.000		
Promotion	.145	2.549	.029		

Source: SPSS results

The table shows that each of pricing and promotion has an impact in investor response, while product and distribution have been excluded, the coefficient of multiple determination value refers to 77.4% (adjusted R² 72.9%) of the systematic variation in investors response are explained by the combined influence of pricing and promotion strategies adopted in IPO, and the rest of this percentage was effected by other variables. On the other hand, this model is significant statically and fit to predict in general based on Fisher's and T-test statistics at 5% level.

4. Conclusion

The results of this paper show that two elements of marketing mix (pricing and promotion) play role in investors' response to new shares issued by IPO process. In other words Syrian investors are paying more attention to the issuance price as well as the promotional efforts accompanying the IPO stages, while not caring for the type of shares issued and the way they buy stocks through distribution outlets.

Hopefully, the Syrian investors can develop their efficiency in investment decision making based on this study; Syrian companies can also use a marketing function approach to increase the quality of their IPO, in addition, financial regulators that can enhance IPO control.

In general this study recommends the Syrian government to implement a plan to stimulate companies to go public, which can lead to positive growth and diversification of investment channels, in turn contributing to economic development.

For future research, we recommend further research on factors that may affect successful marketing efforts in financial markets, and also a comparative study on investor decisions within different markets. Finally an empirical study can be made by combining the financial and marketing measurements in stocks exchange.

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Appendix**Sample of companies**

Company	IPO year	IPO amount SP	IPO amountUSD	IPO percentage of capital	Coverage ratio
BanqueBemo Saudi Fransi	2003	857,000,000	17,140,000	49%	102%
The International Bank For ,finance&Trade	2003	702,600,000	14,052,000	47%	111%
Bank of Syria and Overseas	2003	1,189,500,000	23,790,000	40%	208%
Bank Audi Syria	2005	625,000,000	12,500,000	25%	988%
Arab Bank-Syria	2005	364,950,000	7,299,000	24%	441%
Byblos Bank Syria	2005	300,000,000	6,000,000	15%	198%
Syria Gulf Bank	2006	390,000,000	7,800,000	26%	245%
Cham Bank	2006	1,250,000,000	25,000,000	25%	518%
UnitedInsurance Company	2006	433,500,000	8,670,000	51%	107%
SyrianKuwaiti Insurance Company	2006	425,850,000	8,517,000	50.10%	167%
National Insurance Company	2006	450,500,000	9,010,000	53%	100%
SyriaInternational Insurance- Arope	2006	503,000,000	10,060,000	50%	100%
Orient Insuranc Company	2006	433,500,000	8,670,000	51%	100%
Syria International Islamic Bank	2007	2,550,000,000	51,000,000	51%	336%
Al-Aqeelah Takaful Insurance	2007	1,020,000,000	20,400,000	51%	101%
SolidarityAlliance Insurance	2007	510,000,000	10,200,000	51%	144%

Bank Of Jordan Syria	2008	505,200,000	10,104,000	34%	100%
Fransabank Syria	2008	630,000,000	12,600,000	36%	235%
Bank Alsharq	2008	512,500,000	10,250,000	21%	438%
Qater National Bank-Syria	2009	1,700,000,000	34,000,000	34%	268%
Al Baraka Bank - Syria	2009	1,750,000,000	35,000,000	35%	428%

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Assessing corporate potential innovativeness

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Abstract

The paper aims to present an empirical application of originally developed model for corporate potential innovativeness assessment and comparison. Proposed model provides framework for combined static and dynamic potential innovativeness assessment using fuzzy logic. The fuzzy logic is used to assess corporate potential innovativeness from two perspectives: resources conditioning innovation activities in enterprise and engagement of enterprise in their continuous development. In this context selected companies from information technology sector listed on Warsaw Stock Exchange were examined. The need for corporate innovativeness measurement and evaluation for the management purposes arises from its growing importance in building enterprise value and achieving long-term competitive advantage.

Keywords: *fuzzy logic, fuzzy model, potential innovativeness, innovativeness assessment*

JEL Classification: *C69, M10, O32, Q55*

1. Introduction

In the literature innovation and innovativeness are seen as the driving forces of economic development, which was first pointed out by Joseph A. Schumpeter in the first half of the twentieth century in his vision of creative destruction that refers to the mechanism of changes in the capitalist economy (Schumpeter, 1960).

The definition of innovativeness, similarly to innovation itself, is considered by particular researchers in many different contexts. Most often it is emphasized, that innovativeness is a specific ability or skill of an enterprise to search for, implement, and disseminate innovations continuously (Pomykalski, 2001). Consequently, possessing it allows the enterprise to implement new products, processes, or ideas (Hult et al., 2004). More extended definitions depict innovativeness as an organization's inclination to seek, create, and implement new products, technologies, services, markets, and management methods; to undertake actions in uncertain situations; and to monitor the market and competition, forecast market situations and react quickly to changes by breaking routines, changing ways of communicating, and developing new ways of organizing (Francik, 2003).

It should be also noted, that many of innovativeness definitions goes beyond merely exposing the same abilities or skills, emphasizing the results of its possession and use. In this way, innovativeness is the ability of an organization to control and maintain high dynamics of value creation, which manifests itself in using occasion to generate change and to process, as well as implement, new ideas in practice (Jin, Hewitt-Dundas, Thompson, 2004) earlier than do other enterprises (Rogers, 1995). Innovativeness as ability should also enable an effective allocation of resources, aiming at creating an optimal configuration of competitive advantage (Morgan and Berthon, 2008).

Therefore, innovativeness can be seen in the context of widely understood potential for creating innovation and continuous involvement in its development – the so-called potential

innovativeness – or in the context of the specific effects of undertaken innovative activities and their impact on the enterprise financial results – the so-called resultant innovativeness (Nawrocki, 2012; Yeung, Lai and Yee, 2007). Differentiating these two types of innovativeness is very important, as high innovative potential does not always translate into a very good result of the innovative activity and vice versa (Simpson, Siguaw and Enz, 2006).

Although the theory of innovation proposed by Schumpeter refers to the economy from first half of the twentieth century, the importance of innovations did not devaluate at the time, but quite the contrary they have become one of the major determinants of competitiveness in the nowadays market economy (e.g. Prahalad and Hamel, 1990; Drucker, 1992; Porter, 1998). The pressure on innovation and innovativeness in recent years is particularly strong and visible in a variety of contexts. The images of innovative countries, innovative regions, innovative cities or innovative companies are created. On the capital markets were created separate segments dedicated to innovative companies in particular - that idea was behind the creation of NASDAQ in the United States and in Poland on the Warsaw Stock Exchange New Connect segment, as well as earlier TECHWIG. Unfortunately, due to the width and complexity, and therefore ambiguity, of innovation and innovativeness concept, in recent years can be seen that especially different companies very easily identify themselves as innovative and, what is worse, this phenomenon over time becomes intensified. Reasons of such actions arise from the fact, that innovation, regardless of documented positive impact on the development of economies, or corporate results, is associated with a certain prestige, and inspires respect, which even with very limited or even pretended innovative activities can easily be used in marketing operations and thereby translate into market success. Therefore, particular importance acquires possibility of most objective assessment of companies' innovativeness, which should allow for their credible and reliable differentiation.

Admittedly it must be noticed, that literature is rich in various approaches to the corporate innovativeness measurement/assessment, which can be gathered in several groups. The first one consists of methods used by different international and national institutions (e.g. Eurostat, Central Statistical Office of Poland) to investigate periodic innovative phenomena: *Frascati Manual* – recommendations regarding evaluation of companies' engagement in research and development (OECD, 2015), *Oslo Manual* – recommendations regarding collecting and analysing data in reference to widely understood innovative activity (OECD and Eurostat, 2005). The second group involves methods based on the resource approach, which includes the concept of strategic management, with the focus on investigating organisation's resources and skills (Pawłowski, 2005). The third group consists of methods focusing on time factor, specifically emphasizing the moment of implementing an innovation in relation to the competition – historical, cross-sectional and complex methods (Rogers, 1995). Clearly, apart from the abovementioned methods, there are many others that can be traced in the literature, but they are merely some modifications or compilations of them.

However, at the same time, it is often stated (e.g. Lev, 2001; Mazzucato, 2006), that most of innovation/innovativeness studies are generally quite radically affected by various kinds of drawbacks such as: very narrow perception of innovativeness, problematic data updating, lack of synthetic innovativeness measure/assessment or generalization of final results. Therefore, to fill the gap in this area, the author conducts research on developing corporate innovativeness assessment model based on the use of fuzzy logic and publicly sources of innovation. The goal of this paper is to present a practical application of designed so far model version focused on an evaluation of corporate innovative potential.

2. Basic Assumptions, Data and Methodology

Proposed in this paper form of corporate potential innovativeness assessment model is next stage of its development and it is little modified version of concept published last year after ICoM2016 (Nawrocki and Jonek-Kowalska, 2016a and 2016b). In contrast to the statistical and econometric methods used for example in the enterprise financial situation evaluation, assessment criteria selection in proposed solution were carried out arbitrarily on the basis of author's knowledge and experience in the field of companies' innovativeness analysis.

Suggested methodology of corporate innovative potential assessment is supposed to be of universal character and may be used for enterprises, that publish annual reports (Nawrocki 2012). It includes two aspects: (i) the widely understood resources determining innovative activity and (ii) engagement in its continuous development. As for modifications to the concept proposed last year on ICoM2016 (Nawrocki and Jonek-Kowalska, 2016a and 2016b), which arises during empirical application of the model, they refer to:

- elimination "laboratory" in the material resources assessment (problem with data);
- detailing the financial liquidity assessment (quick ratio and operational cash-flows to short-term liabilities ratio);
- detailing the debt level and ability to its service assessment (financial debt to equity ratio and net profit from sales plus amortization to net debt ratio);
- using percentage net value growth of intangibles as well as property, plant and equipment instead of their restoration indicators;
- replacing financial results and cash flows assessment by cash creation results assessment, which consisted of financial surplus to investing and financial expenses relation as well as percentage growth of cash to total assets ratio;
- detailing change of capital and assets structure assessment (percentage growth of net working capital to total assets ratio).

The structure of proposed corporate potential innovativeness assessment model, along with the most detailed assessment criteria within the particular modules, is presented in Figure 1.

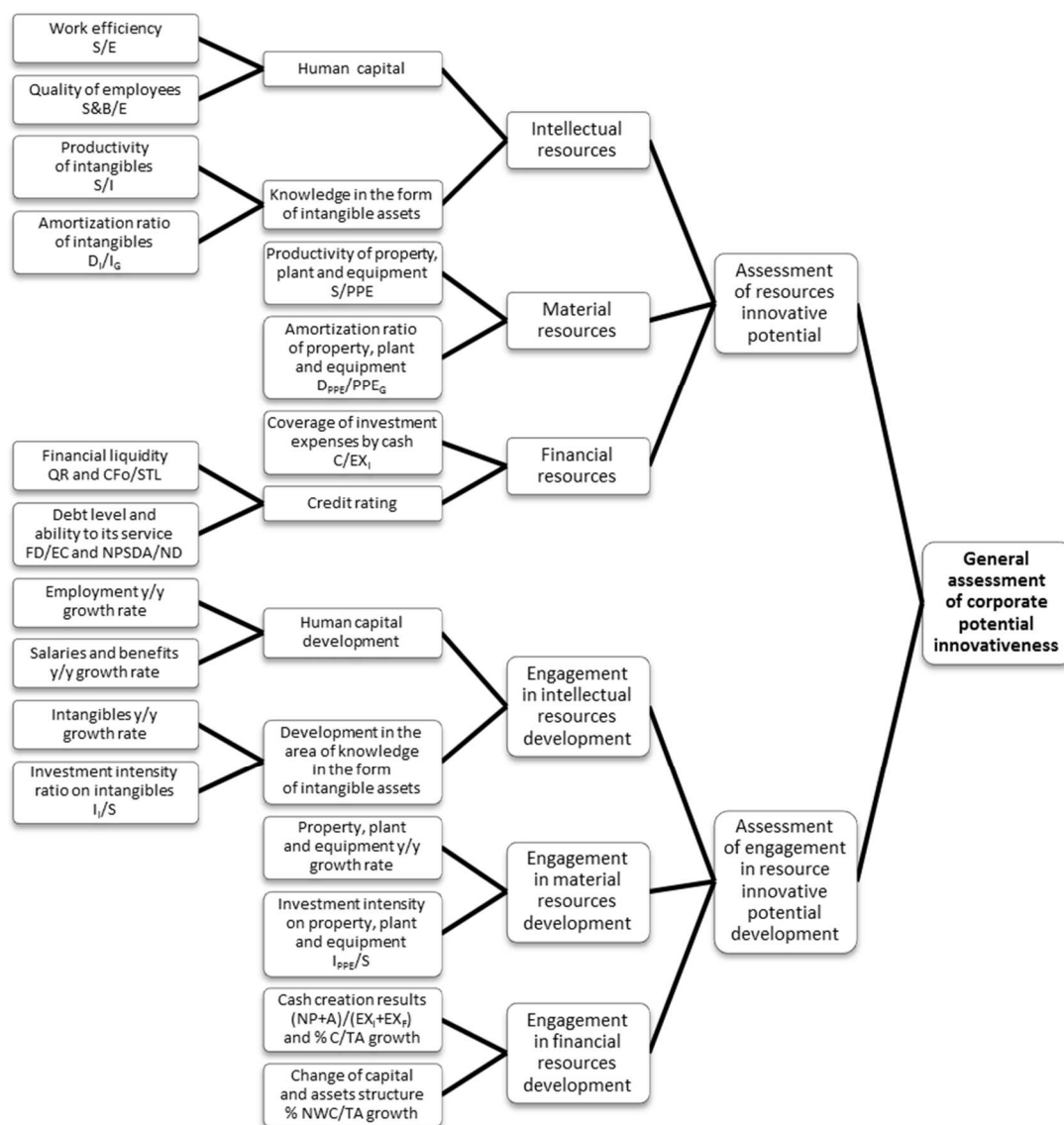
In the proposed model firstly it is supposed to obtain partial assessments within the distinguished basic assessment criteria, which result from ratios calculated on the basis of data from annual reports. Next, aggregated assessments' results may be obtained in the areas of intellectual, material and financial resources, as well as engagement in development of each of these three types of resources. Furthermore, these results constitute foundations for calculating general assessments in the areas of resources' innovative potential and engagement in its development, so that in the final stage, on their basis, it is possible to achieve general potential innovativeness assessment for the analysed enterprise.

The calculation tool in the suggested solution is based on the fuzzy set theory, which is one of the approximate reasoning methods (Zadeh, 1965; Piegat, 2003). Thus, basing on the general model structure (Figure 1), the fuzzy model was developed. In relation to its construction the Mamdani approach was used and some assumptions were made (Nawrocki and Jonek-Kowalska, 2016a and 2016b):

- for all input variables of the model, the same dictionary of linguistic values was used, and their value space was divided into three fuzzy sets named {low, medium, high};
- for output variables of the model, in order to obtain more accurate intermediate assessments, the space of linguistic values was divided into five fuzzy sets named {low, mid-low, medium, mid-high, high};

- in case of all membership functions to the particular fuzzy sets, a triangular shape was decided for them (Figure 2 and Figure 3);
- the values of fuzzy sets characteristic points (x_1, x_2, x_3) for the particular input variables of the model were determined partly basing on the literature on enterprises financial analysis and partly arbitrarily, basing on the distribution of analysed variables values and on the author experience within the considered issue (Table 1);
- for fuzzification of input variables simple linear interpolation method was used;
- fuzzy reasoning in the particular knowledge bases of the model was conducted using *PROD* operator (fuzzy implication) and *SUM* operator;
- for defuzzification of fuzzy reasoning results within the particular rule bases simplified Center of Sums method was used.

Figure 1: General structure of corporate potential innovativeness assessment model



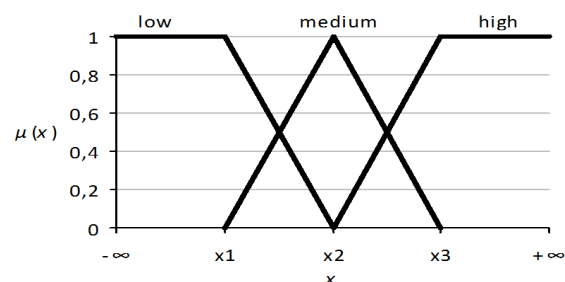
Source: Author's own processing based on (Nawrocki and Jonek-Kowalska, 2016a).

Notes:

S - Sales Revenue, E - Employees, S&B - Salaries and Benefits, I - Net Value of Intangibles (without Goodwill), D_I- Depreciation and Amortization of Intangibles (without Goodwill), I_G - Gross Value of Intangibles (without

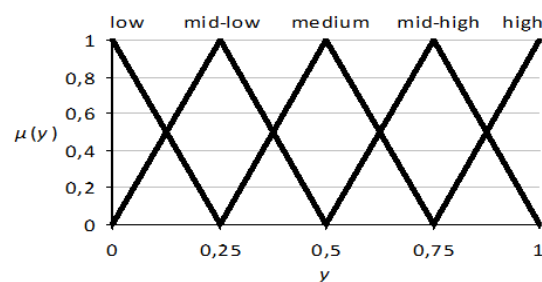
Goodwill), PPE -Net Value of Property, Plant and Equipment, D_{PPE} - Depreciation and Amortization of Property, Plant and Equipment, PPE_G - Gross Value of Property, Plant and Equipment, C - Cash, EX_I - Investment Expenses, QR - Quick Ratio (Current Assets less Inventories and Short-term Accruals to Short-term Liabilities), CFO- Cash Flows from Operational Activity, STL - Short-term Liabilities, FD - Financial Debt, EC - Equity Capital, NPSDA - Net Profit from Sales + Amortization, ND - Net Debt (FD - C), I_I - Expenses on Intangibles, I_{PPE} - Expenses on Property, Plant and Equipment, NP - Net Profit, A - Amortization, EX_F - Financial Expenses, TA - Total Assets, NWC - Net Working Capital.

Figure 2: The general form of input variables membership function to distinguished fuzzy sets



Source: Author's own processing

Figure 3: The output variables membership function to distinguished fuzzy sets



Source: Author's own processing

Table 1: The values offuzzy sets characteristic points for particular input variables of the corporate potential innovativeness assessment fuzzy model

	x1 $\mu(x) =$ 1/low	x2 $\mu(x) =$ 1/medium	x3 $\mu(x) =$ 1/high
Work efficiency	0	150	300
Quality of employees	0	60	120
Productivity of intangibles	0	7,5	15
Amortization ratio of intangibles	0	0,5	1
Productivity of property, plant and equipment	0	7,5	15
Amortization ratio of property, plant and equipment	0	0,5	1
Quick ratio	0	0,5	1
Operational cash-flows to short-term liabilities ratio	0	0,5	1
Financial debt to equity ratio	0	1	2
Net profit from sales plus amortization to net debt ratio	0	3	6
Coverage of investment expenses by cash	0	0,75	1,5
Employment y/y growth rate	-5%	0%	5%
Salaries and benefits y/y growth rate	-10%	0%	10%
Intangibles y/y growth rate	-20%	0%	20%
Investment intensity on intangibles	0%	5%	10%
Property, plant and equipment y/y growth rate	-20%	0%	20%
Investment intensity on property, plant and equipment	0%	5%	10%
Financial surplus to investing & financial expenses ratio	-1,5	0	1,5
Cash to total assets ratio y/y growth rate	-20%	0%	20%

Source: Author's own processing

Next, taking into consideration the general structure of the corporate potential innovativeness assessment model presented in Figure 1, author, basing on his knowledge and experience

in the area of analysed issue, designed 17 rules bases in the form of „IF – THEN” (15 bases with 9 rules and 2 bases with 27 rules), achieving this way a „ready to use” form of fuzzy model.

It is also worth noting, that intermediate and final assessments generated by the model take values in the range between 0 and 1, where from the viewpoint of analysed issue, values closer to 1 mean a very favourable result (higher potential innovativeness), while values closer to 0 indicate a result less favourable (lower potential innovativeness).

All calculations related to the presented fuzzy model were based on self-developed structure of formulas in MS Excel.

3. Results and Discussion

In order to verify the proposed model the potential innovativeness assessment was conducted for three companies from the IT industry creating ERP software for SMEs, which shares are listed on the Warsaw Stock Exchange – Asseco Business Solutions, Macrologica and Simple. According to the adopted methodology, the basis for the potential innovativeness assessment of abovementioned entities were data acquired from annual reports published by these companies for the 2016 year (Table 2).

Table 2: The no fuzzy values of investigated companies' input data

	Asseco Business Solutions	Macrologica	Simple
Work efficiency	278,71	174,08	154,73
Quality of employees	118,31	98,29	64,77
Productivity of intangibles	15,89	4,61	3,92
Amortization ratio of intangibles	0,78	0,37	0,56
Productivity of property, plant and equipment	15,34	6,67	8,21
Amortization ratio of property, plant and equipment	0,60	0,49	0,55
Quick ratio	4,05	1,63	0,87
Operational cash-flows to short-term liabilities	1,91	1,51	0,29
Financial debt to equity ratio	0,00	0,05	0,36
Net profit from sales plus amortization to net debt	0,00	0,00	1,29
Coverage of investment expenses by cash	5,68	1,03	0,17
Employment y/y growth rate	7,0%	0,9%	-4,6%
Salaries and benefits y/y growth rate	4,0%	2,3%	-5,2%
Intangibles y/y growth rate	-1,8%	8,8%	24,7%
Investment intensity on intangibles	3,9%	0,5%	9,6%
Property, plant and equipment y/y growth rate	14,1%	14,2%	-4,6%
Investment intensity on property, plant and equipment	3,5%	6,5%	2,8%
Financial surplus to investing and financial expenses	1,09	1,09	0,37
Cash to total assets ratio y/y growth rate	10,3%	1,9%	0,5%

Source: Own calculations based on companies' annual reports for 2016 year

The results obtained during the research within individual modules of considered fuzzy model presents Table 3.

Table 3: The no fuzzy output values from individual modules of the model obtained for investigated companies

	Asseco Business Solutions	Macrologi c	Simple
Human capital assessment	0,940	0,688	0,527
Assessment in the area of knowledge in the form of intangible assets	0,831	0,445	0,356
Assessment in the area of intellectual resources	0,855	0,566	0,442
Assessment in the area of material resources	0,932	0,476	0,514
Financial liquidity assessment	1,000	1,000	0,580
Assessment in the area of debt level and ability to its service	1,000	0,982	0,773
Credit rating assessment	1,000	0,987	0,666
Assessment in the area of financial resources	1,000	0,658	0,170
Assessment of resources innovative potential	0,877	0,530	0,321
Human capital development	0,821	0,599	0,169
Development in the area of knowledge in the form of intangible assets	0,425	0,387	0,967
Engagement in intellectual resources development	0,623	0,493	0,414
Engagement in material resources development	0,524	0,665	0,173
Assessment of cash creation results	0,782	0,696	0,567
Engagement in financial resources development	0,665	0,632	0,599
Assessment of engagement in resource innovative potential development	0,582	0,578	0,333
General assessment of corporate potential innovativeness	0,716	0,553	0,340

Source: Own calculation

Taking into account obtained results, it can be concluded that Asseco Business Solutions is the most advantageous in terms of potential innovativeness assessment and dominates the other two entities at both, the final result level (0.716) and the vast majority of less aggregated results (only in the cases of intangible assets and material resources development it gave way to respectively Simple and Macrologic). Macrologic's second-highest rating was slightly above average (0.553), which generally also matched ratings at more aggregated levels, either in terms of resource potential or engagement in its development. In turn, the lowest result in terms of the overall potential innovativeness assessment from the three considered entities fell to Simple (0.340), which was mainly due to low scores in the areas of financial resources and engagement in material resources development, with generally quite average scores for other higher aggregated levels.

4. Conclusion

The model of corporate potential innovativeness assessment, which practical application has been shown in this paper on the example of three IT companies, can be an interesting alternative or complement to commonly used so far methods, which mostly bases on survey research. One of its biggest advantages is possibility of obtaining one final corporate innovativeness assessment, as well as others less aggregated, with the use of data from public sources, which additionally are regular. This enables quite actual and good orientation in both, the general and more in-depth, innovativeness level of assess enterprises, what can be the basis for various comparison analysis and managerial decisions regarding e.g. corporate innovativeness management or managing the image of an innovative company.

At the same time, however, it must be emphasized, that presented model has still some limitations, regarding mainly input data accessibility and comparability between assessed companies, and requires further considerations, verification of adopted criteria and wider empirical research.

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Innovation Management and Electronic Trade

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Abstract

Businesses should carry out innovative activities in order to ensure compliance with the tough competition conditions of the applications or products they carry out in their fields. Innovation is now the key to sustainable success in every sector and field. Businesses should work by using the sources of information that are most appropriate in terms of business while conducting innovation activities. Innovative projects to be undertaken in this area are crucial for the development of companies as well as for the global scale of e-commerce.

The design and implementation of an effective management strategy along with innovation is crucial for the ability of the business to regularly control its own performance and update the operating systems of the company in this respect. At the time when technological developments are rapidly entering our lives, businesses that cannot keep up with the developments will fall into a disadvantageous situation in terms of competition. The use of resources from domestic and foreign sources in innovation activities will ensure faster inclusion in the process. If these conditions are met, it should always be remembered that businesses will be in an advantageous position in terms of competition.

All companies that want to gain competitive advantage in a dynamic sector should invest in electronic commerce and bring all their products and services to the customer in virtual environment. Nowadays this is no longer an option, it is a necessity. Electronic commerce will increase the speed of doing business, delivering products to the customers at a lower cost through the internet, and reducing the costs to a great extent by allowing them to enter the world markets more competitively. This will expand the market space and make it easier to reach potential customers. At this point, companies will gain a core competitive advantage and both sales capacities and annual sales will be increased with the dynamism brought by the internet. Considering that the internet has also reduced stock and inventory costs, it can be said that electronic commerce has a direct and positive effect on business performance if it is perceived and used correctly. In this study, the interaction of innovation management and electronic commerce will be examined in this direction.

Keywords: Innovation, innovation management, electronic commerce.

JEL Classification: O3

1. Innovation

1.1 Concept

Various definitions are being made about the concept of innovation (innovation), which has become the most important competition tool in today's constantly changing and changing economy. Innovation covers all activities to create a new product or process of production, from scientific research to disposal, development and commercialization. We are in a period when knowledge, imagination and ideas are blended and the usual patterns are collapsed. Innovation lies at the heart of all search and future plans (Yilmaz, 2003: 4).

In addition, innovations do not always have to be created as a result of novelty. The result may be just a change. For this reason, the word "innovation" is not the exact opposite of "novelty".

From the past to the present day many definitions of innovation have been made. One of the first definitions of innovation is put forward by Schmookler (1966), and according to this definition, companies that use a new method or input to develop a product or service are making a change and this is called an action innovation made by the companies that made the change first. Later, the concept of "Industrial Innovation" was used by Freeman (1982). According to Freeman, Industrial Innovation includes design, production, management and commercial activities carried out for the marketing of a new/improved product or for the first time commercial use of a new/improved process or equipment. Porter (1990) explains innovation in the context of competitive advantage. According to him, companies have competitive advantage with innovation.

Innovation, as a concept, both a process and a result tells. According to the definition adopted by the European Commission (1995), innovation used in the sense of "renewing" means "turning an idea into a marketable product or service, a new or improved manufacturing or distribution method, or a new method of social service". Innovation is also used to mean "novelty" that emerges as a result of the process and is also referred to as "marketable, new or improved product, method or service". Schumpeter describes the historical development process of innovations as "consecutive industrial revolutions" (in Freeman and Soete, 1997).

According to Schumpeter, every "long wave" is unique because of technological innovation differences in the period, as well as differences in events such as wars, discovery of gold mines, or famine (Freeman and Soete, 1997). That is, each long wave is "moving and irregular". However, what Schumpeter needs to do is to analyze the properties of the system that creates these fluctuations, rather than examining random events that lead to this mobility and irregularity (Freeman and Soete, 1997). According to Freeman and Soete, technological innovations are the most important of these characteristics. Technological innovations are regarded as engines of economic growth in the long run and technological developments have a central role.

The Schumpeter approach sees the system as a network of firms and other economic actors with different technologies, organizational structures, approaches and codes of conduct, as random events cause fluctuations in the technological innovation process (Odabaşı, 2005). While these differences provide "competitive advantage" with technological superiority, the competitiveness of companies and innovators who can not achieve this superiority, that is not innovating, innovative or not, is diminishing. Schumpeter has described this process as "creative destruction", which has said that companies and economies that can not produce innovation will disappear in time in the system (Odabaşı, 2005).

In other words, innovation for businesses means "a potential new source of action or a new source of wealth" (Durna, 2002). In this context, innovation is an economic process. Eventually a product, a service or a more advanced management-production model can emerge. The knowledge necessary for the innovation to be produced needs to be formed. So there is no coincidence in innovation.

1.2 Importance of Innovation

Although we have already heard the word of innovation more and more in recent years, innovation is not a new phenomenon. It can even be argued that innovation has existed since the time of humanity since, from its inception, man has tended to think about how to do things more effectively in new and different ways (Faggerberg, 2006). Innovation is something that human beings are looking for and it is inevitable to create innovation in many cases or to adapt to innovations created. This development has started to happen much faster than in the past and

has become a necessity with the scientific developments triggering each other in the century we are in.

There has been a significant increase in the number of academic studies undertaken in recent years. One of the reasons for this is that innovation has come to the realization of social welfare and economic growth. In fact, famous economist theorist Joseph Alois Schumpeter, before the 1950s, especially focused on the role of entrepreneurs in economic growth. It is known that Schumpeter's "Growth Theory" is important in determining the innovation policies of developed countries. For this reason, Schumpeter's view of entrepreneurship, competition and innovation in this work has been seen as useful to understand the importance of innovation.

As summarized in the work of Howitt (2009), Schumpeter recognizes the innovations that entrepreneurs bring to production through research / scientific research and innovation as the driving force for progress. According to Schumpeter's "Growth Theory", in the communities where there are no entrepreneurs applying innovations, profits will fall under the influence of competition, and interest rates will go down to zero. In economies where entrepreneurs include innovations, production volume and profits will increase, competition will be constantly spurred, and prices will decrease. As a result, society will improve and economic prosperity will emerge, as investors will increase investments from one side and consumers and consumers will benefit from lower costs and prices.

Innovation ensures that individual and social needs (health, rest, work, transportation, etc.) are met at a better level. Innovation is also the essence of the entrepreneurial spirit: Every new venture, no matter what happens, comes at the expense of a certain innovation. Moreover, all initiatives need to be constantly renewed. This is true also for countries. In order to sustain economic growth, competitiveness and employment opportunities, countries have to turn new ideas into rapid, technical and commercial success.

1.3 Types of Innovation

There are many types of innovation as well as many areas and sectors where innovation can be done. However, in the study, innovation is related to e-commerce in studying the types described in the literature, and in accordance with these limits: Product Innovation, Marketing Innovation and Business Model Innovation.

1.3.1 Product Innovation

If you are able to regularly follow new products on the market in any sector, it means that you are in that team or tracking the industry very closely. Product innovation takes place in two ways; To create a new product that is unprecedented in the market, to bring new excitement to the marketplace by making improvements in an existing product (Shavinina, 2003). According to the definitions of Durgut et al. (2003), a product resulting from technological product innovations can be a technologically "new" product or technologically "improved" product.

Innovation is achieved by combining new information with a technological infrastructure in a product innovation made in information technologies. Product innovations have a shocking effect on the market. When the Apple company launched the I-Phone, it made the following announcement when making a product announcement on its website: "We removed the "Macintosh" and changed the computer culture. We changed the music culture by driving the I-Pod to the market. Now we are aiming to recreate the phone culture with I-Phones.". Considering the popularity and success of I-Phones, we can say that this latest product innovation has changed the telephone culture.

Product innovations are made with products that emerge by evaluating the natural process or add new features to compete to provide a competitive advantage when the customer and market need a new product.

1.3.2 Marketing Innovation

In the age of communication, the way in which a product and service can express its own benefits goes through good marketing. Innovative products that benefit in practice are not profitable if they are not knocked out with a successful marketing strategy.

Major market players who will perform marketing innovation are not forced to place their products or services in the marketplace if they are able to adapt themselves to environmental changes in the sectors. Large companies are willing to pass through the filter to see how much creativity and innovation will return to them (Jones and Tilley, 2003).

Marketing Innovation: to get ahead in the competitive advantage is to pass on the different marketing strategies that customers can take care of properly. The realization of different and new designs is the development and implementation of different marketing directives or the improvement and better management of existing ones (Elçi, 2007).

An example of marketing innovation is a good example of successful marketing innovations, in which products or services that are offered free of charge, but that are met by another factor.

1.3.3 Business Model Innovation

Business model innovation can be described as changing the nature of the business model in choosing Innovation that will create a competitive advantage, or making the existing business model more viable in changing environmental conditions. While evaluating the business model, in addition to designing it as a whole, it is necessary to evaluate the external factors that can influence the business model. A good innovation should have solid foundations.

Business model innovation is that the business operator, the industry, goes to new changes that increase performance, profitability, and functionality over at least one element of the current model.

Business model innovation is ultimately about creating value for companies, customers and society. Instead of old models is to bring the new. Apple has created an innovative new business model with the I-pod digital media player and the I-Tunes.com online store, making it the dominant player in the online music market. With an innovative business model based on a technology called Skype "peer to peer" (peer-to-peer communication technology), the world has been able to call everywhere at very low prices and to speak Skype free of charge. Today, Skype is the communications company that performs the world's largest transnational voice traffic. Skype can be said to have a business model that seriously threatens telecom companies (Osterwalder and Pigneur, 2010: 98). As in this example, business model innovation occurs when the nature of sectors and markets becomes compulsory with environmental factors, technological and geographical changes over time.

1.4 Innovation Management

According to the explanations above, innovation management;

- Includes all types of innovation (technological, organizational, presentation).
- Covers scientific, technological and administrative processes.
- It must control the processes that run entirely in the organization. .
- Management of processes, each of which is different and unrepeatable, is essential..

- Focuses on coping with the resistance that can arise against innovation in the company and on the market.
- It also requires the resolution of your behavioral problems.

2. Electronic Trade

Electronic commerce, in its simplest form, means buying and selling products via the internet, and the first image that people actually create is retail purchases made by consumers on Amazon-like internet sites. However, according to Dave Chaffey, e-commerce is not to be considered as financial transactions between organization and customer via e-commerce networks, as stated in the book "E-Business and E-Commerce Management". E-commerce includes all electronic transactions between an organization and any third party. According to this definition, non-financial transactions such as customers' information requests should also be considered as part of e-commerce.

International organizations and interested persons and organizations have various definitions of electronic commerce. According to the World Trade Organization (WTO); the production, advertising, sale and distribution of products through telecommunication networks (WTO, 2014).

The Organization for Economic Cooperation and Development (OECD) has defined electronic commerce activity as the realization of goods and services exchanges over computer networks through specially designed methods for ordering / receiving purposes (OECD, 2013).

The history of electronic commerce is much older than the emergence of personal computers and the spreading of everything to be found in every home. According to John Markoff's book "What the Dormouse Said: How the Sixties Counterculture Shaped the Personal Computer Industry", the first electronic commerce activity was carried out on this primitive communication network, the father of the Internet. In 1971 and 1972, he mentioned that the first transfer of money between Stanford University Artificial Intelligence Laboratory students and Massachusetts University of Technology (MIT) students was made through ARPAnet accounts for a drug purchase. Immediately after the most primitive form of the Internet, electronic commerce has emerged in its simplest form (Markoff, 2005).

Electronic Data Interchange (EDI) and Electronic Money Transfer (EFT) technologies, which began to be used in the late 1970s, have played a major role in the development of electronic commerce. EDI is a standardization system that enables electronic data transmission between companies, government agencies and other organizations to be realized within the framework of certain protocols and with minimal human intervention. In 1996, the American National Standards and Technology Institute defined EDI as "transferring messages between computers that are formatted in a certain format and represent documents outside of monetary instruments." EDI standards are designed to facilitate business communications between organizations. Although EDI is the foundation of electronic commerce, it has not been able to spread quickly. As pointed out by Tian and Stewart (2007), only 1% of firms in the US were using EDI technology at the end of the 1990s. Connecting to an EDI network requires a very costly technology and has a very slow operation, which is shown as its main reasons.

The first online shopping system in history was developed by Michael Aldrich in 1979. Michael Aldrich, named "teleshopping" for the system he developed by connecting to a computer that can make money transfers through an ordinary television phone line, is one of those who set the foundations of electronic commerce, the online shopping system's forerunner and worldwide billion-dollar business area (Aldrich, 2011).

One of the biggest contributors to electronic commerce today is of course British Scientist Tim Berners-Lee, who founded the World Wide Web (WWW) system at CERN in 1989. Berners-Lee, who developed the "World Wide Web" system on the NeXT computer to provide automatic information sharing for universities and institutes around the world, shared information on how to use the internet and how to set up a server in the world's first internet site established in CERN. With the advent of CERN's "World Wide Web" software on the public domain on April 30, 1993, the "World Wide Web" began to grow at a rapid pace (O'Luanaigh, 2014).

The 1990s are the years when the development of electronic commerce has gained momentum. Many large and well-established e-commerce sites were established during this period. These sites are important in that Cleveland-based Book Stacks Unlimited's "www.books.com", founded in 1992, is the first electronic commerce site to provide online shopping with credit cards (Zafeeruddin, 2014: 26). However, the Netscape 1.0 version, which was released on the market in late 1994, made a major contribution to the development of electronic commerce by providing secure SSL credit card transactions over the Internet (Hiser, et al., 2001). In 1995, the US National Science Board accelerated the development of the electronic commerce industry by removing the strict prohibition against the establishment of commercial companies over the Internet (Zafeeruddin, 2014: 27). Immediately afterwards, in 1995, Amazon.com and eBay.com, the world's largest shopping sites, were established (Hiser, et al., 2001). In 1999, Alibaba Group's electronic commerce site began operating in China, becoming a company with 217 countries in 2014 and a trading volume of US \$ 90.5 billion for the third quarter of the year (Alibaba.com). The Alibaba example is one of the most prominent examples of how electronic commerce has been developing at a high pace since the 1990s.

3. Requirement of Electronic Trade and Innovation

The information society, which has come into being due to changes in consumption habits, the emergence of new forms of production and globalization, the development of mass media in line with the development of technologists, has affected individuals' consumption and production patterns. The development of the mass media and the fact that the internet is the decisive point in human life has increased the scope of the internet on the individual. The Internet has brought individuals closer to the pleasure and ease at every stage of human life. Therefore, network management has been used by the dominant forces in the dimensions of directing, influencing, alienating, commodifying, churning. In this context, e-commerce is an example of a way of facilitating individuals' lives, providing them with benefits and pleasure, meeting certain needs that are necessary or unnecessary. With globalization, economic and social developments in the global marketplace, increasing competition environment, changing consumer habits, etc. causes the production to be realized in the direction of consumer understanding.

In recent years, with the widespread use of mass media and advanced technologies, consumers in the field of electronic commerce have increased their habit of making virtual shopping. The convenience and advantages provided by the individual has made the sector more attractive. The individual constantly encircled by objects, the internet, and by this means, virtual shopping is defined as the point of self-esteem, pleasure, leisure time evaluation, desire and desire to reach satisfaction. The individual has been transformed into an object of consumption, including into the work he has done, and the time he has spent, in the work that has been constructed by the system. Bocock (2008) noted that a new consumption capitalism has developed, and that this capitalism has created various problems, and that one of these problems is the lack of connection between the product bought by the consumer and reality. Indicators

and symbols of Baudrillard "hyper real", that is, the product bought by the consumer is not related to the product of his own mind, is turned into an area of signs and symbols. It is entirely coincidental that these products, which are purchased unnecessarily, meet the needs of the consumer. The individual is in the consumer universe with a tendency to purchase or consume unnecessarily or unnecessarily in the desire for consumption. This tendency is realized in the easiest, free and limitless electronic trading environment.

The Internet and the electronic commerce made in this context alienated the individuals from themselves and the society as they virtualized the social relations of the people by minimizing their sincerity against collecting. The system, which makes people easy and ready, strengthened the sovereignty of the society by taking power from it.

Capitalism has reached its ultimate goal through electronic commerce. Both positive and negative aspects of consumption culture have been revealed in electronic commerce practice. The domain of the theories of the consumption society has gained clarity on large-scale individuals.

4. Conclusion

Electronic commerce is a business area that is rapidly developing and conceiving various innovations. Therefore, in order for businesses to succeed, it is imperative that they follow sectoral innovations as well as the academic work done in this area, and that they must be involved in the necessary innovation processes in this direction. In this context, it is important that businesses work with a professional team that will follow innovations in electronic commerce and integrate them into company strategies.

Businesses should give as much importance to R & D work as possible while carrying out innovation activities. In this process, both academic studies, government-supported projects, and similar systems used by different companies should be examined and work should be done in order to obtain optimal benefits from the innovations realized using the information resources most appropriately evaluated from the business perspective. Innovative projects to be undertaken in this area are crucial for the development of companies as well as for the global scale of e-commerce.

The design and implementation of an effective management strategy, as in other areas of innovation in e-commerce, is crucial for the ability of the business to regularly monitor its own performance and to regularly update the operating systems of the company in this regard. At the time when technological developments are rapidly entering our lives, businesses that can not keep up with the developments will fall into a disadvantageous situation in terms of competition. The use of resources from domestic and foreign sources in the innovation activities on electronic commerce will ensure that it is included in the process faster. If these conditions are met, it should always be remembered that you will be in an advantageous position in terms of competition.

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The Contemporary Approach to the Enterprise Competitiveness Management

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Abstract

The article is devoted to the urgent theoretical and methodical problems of enterprise competitiveness management that are connected with the competitiveness of the enterprises in modern economic environment. The authors speak about the problems concerned the definition of essence and methodology of the estimation of the enterprise competitiveness and prove the advisability of the usage subjective approach during the value of the level of competitiveness. The alternative subjective approach to the analytical methodology of enterprise competitiveness is based on the accessible information and includes the results characterizing the level of innovative development of an enterprise. It also contains algorithm of the analysis of the competitiveness for every interested subject taking into account a set of factors, allowing the consideration of their interests that is the base of enterprise management.

Key words: competitiveness, enterprise, analysis methodology, management, subject, subjective approach

JEL Classification: M10, M19

1. Introduction, Own work, Conclusion

The current stage of economic development is characterized by a regular awareness of the need to increase the competitiveness of enterprises to ensure sustainable growth of the economy of the regions and the country as a whole. In the world economy ensuring competitiveness is one of the main objectives of the development strategy for the country, region and firm. And this thesis in turn leads to the realization that any modern state's power and influence more and more depend on its producers competitiveness.

To survive in a competitive struggle and achieve the dominant position of a leader in strategically important sectors and spheres of the world economy, enterprises need to have and develop sustainable and unique competitive advantages. So competitiveness is the main factor in enterprise functioning and growth.

New economic reality generates new problems in relation to the nature of enterprise competitiveness and its assistant analysis methodology that can become the focus of a study. The variety of possible approaches to the problem grows accordingly.

Generally, authorial approaches to determining competitiveness include the following positions:

- competitiveness is determined depending on the level of the object (micro-, mezo- or macrolevel) or on the time aspect (competitiveness on the various stages of economic development was understood differently) and the features associated with it;
- Competitiveness is reduced to a priority characteristic, or vice versa, acts as a universal characteristic of activity.

Often competitiveness turns out to be a focus of research interests in various fields of knowledge. Moreover, many approaches are deprived of the possibility of applying this concept

to solve practical problems, since the scientific value of any economic methodology is mainly determined by the extent to which its content and a set of essential features can be used for practical purposes.

The variety of analytical methods for competitiveness management is explained by a great number of factors affecting the level of competitiveness of an enterprise. Economists often strive to give a broadest overview of competitiveness factors possible as well as their quantitative measurement. This approach has considerable drawbacks:

Firstly, attempts to work out a universal set of factors mean that some of these factors would be purely theoretical and therefore could not be quantitatively estimated.

Secondly, in order to evaluate some of these factors one would need insider information that is difficult to obtain.

Thirdly, insufficient attention is paid to the quantitative assessment of the factors characterizing the level of innovation development of enterprises and the intensity of the use of intellectual resources. But its importance is increasing as the main production resource and becoming as the main competitive advantage.

Finally, some subjects are interested in one priority aspect and wish to find out about advantages related to it only.

For example:

- buyers are interested to know about the competitiveness of the enterprise produce;
- suppliers are interested in estimation of the enterprise ability to pay for the materials and products it orders;
- creditors are interested in estimation of the enterprise ability to repay credits and pay interest on loans;
- investors are interested in evaluation of whether it is expedient to invest in development of the enterprise, in estimation of recoupment of investor's facilities as well as enterprise investment attractiveness
- competitors want to compare the level of enterprise competitiveness with their own to find out their advantages in competitive struggle.

According to the requirements for the analytical methodology for achieving managerial purposes the practical significance of determining the competitiveness lies in the fact that this economic category should reflect the presence of the enterprise's advantages in a certain priority direction of activity for a specific assessing entity. In this context we will use the following definition of competitiveness:

Competitiveness of an enterprise is an economic category that characterizes the level of advantages an enterprise possesses, that is a certain quality that enables it to better satisfy the demands of subjects in certain priority aspect of financial and economic activity.

Next step of competitiveness study is formulating the methodology of competitiveness analysis. In its core lies the individual estimation algorithm that is calculated for every subject interested in acquiring the information concerning the level of enterprise competitiveness. Methodology of enterprise competitiveness analysis should be based on quantitative estimation of factors the subject is interested in. These values should be then integrated in order to obtain index that would characterize the competitiveness of an enterprise for any subject.

A special attention in the methodology is paid to the procedure for assessing the factors that characterize the level of innovative development of the enterprise. And the costs of introducing

innovations are considered as a means of intellectual ensuring the competitiveness of enterprises.

Researches of competitiveness point out that the problem of intellectual resources is considered by different theories within the framework of economic science and proposes to divide them into three groups: economic, managerial and social.

Economic group includes Marxist theory, evolutionary theory of economic change Nelson and Winter and others. From the point of view of the economic approach, intellectual resources represent one of the types of economic resources used by the firm for the production of economic goods.[1]

Managerial concept is based on theory of K. Prahalad, G. Hamel and other founders of strategic management. [2]

Social group consist of theories that regard people as the main generator of intellectual resources and social interactions between them - the theory of human, social and intellectual capital. Specialists in the sphere of strategic management, as intellectual resources of the company, allocate its competencies or abilities (for example, the ability to research or produce inexpensive goods) that can be backed up by such resources and assets as patents, licenses, equipment, etc. From the standpoint of a social (philosophical) approach, intellectual resources participate in the production of all material objects, and therefore are an essential part of each of them.

By proposing a new concept of management the competitiveness of enterprises, we believe that among the factors and quantitative indicators of the level of competitiveness, there must necessarily be factors associated with intellectual resources as the basis for the enterprise development.

As the main market participants are considered buyers, suppliers, creditors, investors, competitors.

Methodology of competitiveness analysis from the *buyer's* point of view includes quantitative estimation of following parameters:

- **product characteristics:** technical (quality) and economic (price, transportation costs, installation cost, etc.). The integral indicator of product competitiveness is defined as the ratio of the group indicator by technical parameters to the group indicator by economic parameters, that is the ratio of the total useful effect from operation or consumption of production to the total costs for the acquisition and use of this product. [3]
- **precise fulfillment** of the terms of the contract by terms, quality, assortment, products. It is advisable to evaluate the level of complaints for the products of interest as the ratio of the number of claims for a specific type of product to the total number of orders for this type of product.
- **business activity** that takes into account stock turnover rate and accounts receivable rate that are calculated based on revenue value;
- **level of innovation** activity that takes into account degree of renewal and contraction of the assortment;
- **company image, brand prestige** that can be evaluated according to the relevant ratings.

Methodology of competitiveness analysis from *supplier's* point of view should take into account quantitative assessment of following parameters:

- **Paying ability** that can be estimated by calculating absolute liquidity index that compares the most liquid assets and short-term liabilities. [4] The maturity of accounts receivable should be less than the maturity of accounts payable, in order to avoid a situation of inefficient diversion of funds from turnover, a shortage of financing current activities and problems with solvency.
- **Stability of the enterprise** in the long run that can be estimated through financial viability level based on financial indicators. Its assessment is important for the supplier that presumes long-term economic relations with the enterprise, especially in the conditions of unstable economic situation.
- **Company image** that we propose to assess by calculating the past-due loan share in the general indebtedness of the enterprise;

From *creditor's* point of view, methodology of competitiveness analysis should evaluate following matters:

- **Debtor reputation** is defined by their credit history. In the case the credit relations are completely new, debtor reputation can be evaluated by calculating the credit growth rate that characterizes the intensity of loans.
- **Financial condition characteristics** include paying ability level, financial independence level and main activity profitability needed to calculate risks. [5]
- **Credit resources could be used for different purposes:**
- In the case of long term credit intended for the development one needs to calculate recoupment of capital investment;
- In the case of short term credit intended for covering current expenses, one needs to calculate indicators of current performance efficiency: stock turnover and turnover assets coefficient. [5]

Methodology of competitiveness analysis from *investor's* point of view considers evaluating the following parameters:

- **Financial condition characteristics** that include financial stability and paying ability indices, as well as sales turnover and sales profitability that define efficiency of current performance and allow to predict the payback period of investments as well as the return on equity that assesses the rationality of investment of investors' capital.
- **Investment activity efficiency** that is assessed by way of calculation of capital productivity and capital and investment profitability. Index growth means additional investment attractiveness.
- **Rationality of financing in respect to company development** is defined by capital structure, ability to maintain and increase own capital, fulfill obligations before company founders according to their share in authorized capital.

From the point of view of *competitors*, methodology of competitiveness analysis should include quantitative estimation of following parameters:

- **ability to increase market share** that is calculated by average annual growth rate of sales volume in series of periods;
- **enterprise activity cost** is defined through calculating cost ratio to sales revenue;
- **company management efficiency** is defined by the enterprise ability to maintain and increase sufficient level of sales profitability;
- **labor force efficiency** is characterized by labor productivity index;

- **ability to maintain paying ability** can be assessed by calculating the coefficient of current liquidity;
- **bankruptcy risk** can be estimated by way of bankruptcy probability models [5];
- **intensity of innovative development** can be estimated by calculating the coefficient that expresses R&D costs ratio to the revenue value;
- **crisis aftermath** can be estimated by calculating the changes in production and sales volume during the time of financial crisis.

When quantitative measurement of parameters is completed, the basic conditional reference enterprise which has the best values for all the estimated indicators of economic activity is determined. Using distance method we calculate the integral competitiveness index of any analyzed enterprise for any subject of evaluation:

$$K_j = \sqrt{\sum (1 - x_{ij} / x_{i\ m+1})^2},$$

where x_{ij} – value of i -index for j object;

$x_{i\ m+1}$ - value i - index of business activity for standard object. [6]

The enterprise with the lowest value gets the highest competitiveness estimation since it is the closest to the reference object.

The use of this approach to the analysis and management of the competitiveness of an enterprise in practice leads to the result that the same enterprise can have a different level of competitiveness from the position of different interested subjects. The same enterprise can be considered as the most effective from the perspective of one subject, while from the point of view of the other it will not be so successful. With the use of a single universal methodology, these differences in the level of competitiveness would be almost impossible to notice.

Our competitiveness analysis methodology with its subjective approach distinctly differs from those presented earlier - by relying on public reporting data and taking into account subjects' interests when they make reasonable managerial decisions. On one hand, using subjective approach economic subjects are able to find their way among the diversity of economic relations. On the other, it helps a concrete enterprise to correct specific aspects of its economic and financial activity which strengthens its competitiveness and ultimately, the country's economy in general.

The methodology can be used:

- in operational management as a means for assessing counterparties in the company's financial and economic activities for operational and objective managerial decisions about the organization of economic relations with the evaluated enterprises;
- in bank management in the framework of justifying the decision of creditors to provide loans and the amount of the loan;
- in investment management on the preliminary stage of determining the object of investment by investors;
- in marketing-management in the process of developing optimal marketing and competitive strategy by the enterprises proceeding from one or another position of competitors.

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Development of Forms of Public-Private Partnership as an Actual Direction of Perfection of a State Policy at Federal and Regional Levels of Management

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Abstract

The article analyzes the main directions of the state policy of the Russian Federation at the federal and regional levels. Special attention should be paid to the study of the problem and the study of the formation of the system of public-private partnership and its basic forms. Separately, the concession is considered as the most development of the form of this interaction, the mechanism for its improvement is shown, and problems that hinder the development of the SHG system at the federal and regional levels in the modern Russia are outlined.

Keywords: public-private partnership, development of the Russian Federation, federal and municipal levels, concession, concession agreement between business and the state, problems of concession development, improvement of PPPs

JEL Classification: M10, M19

1. Introduction, Own work, Conclusion

The PPP management system in each country is largely determined by the level of economic development and the peculiarities of the national legislation on its regulation. Fundamental economic and political rules and legal norms that constitute the state-business partnership in the economic field have been formed in the leading countries for several centuries. They underwent certain transformations during periods of wars, revolutions, economic downturns and depressions, but their basic principles persisted.

The transition of the Russian Federation from a centrally planned economy to a market complicated the position of the regions and increased the unevenness of their development. To address this problem, important trends have emerged in the system of state and municipal management.

The specifics of Russia's current regional governance problems stem from the creation of a new economic space, the elimination of centralized state planning, the increase in regional autonomy, the restructuring of the state structure, the development of ties with other countries, often recurring economic crises, and domestic economic policies. At the same time, the problems of state municipal management are closely linked to the essence of the region, the municipal entity, with their goals and development tasks, and a system of management methods. In modern scientific literature, the region is viewed from different perspectives as a unity of social, economic, cultural, natural, historical and political space [1]. The main features characterizing the region are its integrity, the complexity of the economy, its balance, the proportional development of the productive forces, a certain specialization, resource potential, economic independence, administrative division, the system of state administration.

Among the most important issues of state municipal administration, it is possible to single out the main directions of its development. Such directions are currently:

- improvement of the administrative and territorial division of the Yaroslavl region;

- allocation and formation of growth points in municipalities;
- overcoming differences in the standard of living of the population of individual municipalities;
- increasing the level of development of municipalities;
- the formation of a cluster system based on available resources and enterprises;
- development of entrepreneurship;
- preparation, improvement of placement and use of labor potential;
- overcoming the depressed state of certain municipal entities;
- reforming the structure of the national economic complex;
- ensuring the social orientation of the development of municipalities;
- creation of infrastructure of municipalities;
- deepening of specialization of municipalities;
- creation of market infrastructure;
- development of housing construction;
- improving the management of housing and communal services;
- development of export and import-substituting industries;
- intensification of innovation and investment activities;
- development of neglected lands;
- raising the technical level, informatization of production and product quality;
- ensuring environmental safety;
- improving the management of municipalities.

It is important to note that from the point of view of state regulation of the economy, PPP is aimed at attracting private sector organizations to the implementation of resource-intensive and capital-intensive infrastructure projects, as well as ensuring the development of production activities in a wide range of industries.

It is a permanent partnership with private business that will allow the government to attract additional resources to the state sector of the economy, primarily investments, to ease the severity of budgetary problems, to shift most of the risks to the business sector and at the same time to preserve public use objects. Moreover, in such a system of relations there is a pooling of resources and potentials of the two economic entities. Essentially, the transition to partnership in the sphere of state property means partial and for a fixed period the transfer to the private sector of some - the functions of the state, permitted by law and formalized by the agreement (contract).

Public-private partnership as one of the main forms of government-business relations can be medium-term and long-term relations between the public and private sectors. The partnership includes the distribution of risks and revenues, as well as the use of public and private sector expertise and resources to meet the intended strategic results for the state. Using the PPP scheme makes it possible to increase the efficiency of using:

- budget funds;
 - ensure more efficient project implementation at the certain period.

At the same time, as the PPP scheme is used:

- the quality of services is improved;
- some of the risks are transferred to the private sector;
 - as a result of competition, more effective use of resources is achieved.

At the present time in the Russian Federation are used the following basic forms of PPPs [2]:

- government contracts with private sector investment commitments;
- rent of state property;
- participation in the capital;
- concessions (concession agreements);
- production sharing agreements (PSAs);
 - contracts that combine various types of work and property relations.

According to the World Bank classification, the following forms can be distinguished [5]:

- Management and lease contracts: a private company receives, under management or on a lease basis, state-owned property for a certain period of time. Investments are carried out by the state. In the management contract, the state pays for the services of a private partner and carries operational risks. In the lease agreement, the state receives rent from the lessee, and the operational risk falls on the private company.
- Concession: The government grants the private sector the power to own and use the existing facility under a contract for a fee subject to return. The public sector owns the ownership of the property (real estate), while the private sector reserves the right to expand it and all improvements made during the period specified in the concession agreement. The following types of concessions are distinguished:
 - reconstruction - management - transfer (Rehabilitate - Operate Transfer, ROT);
 - reconstruction - lease - transfer (Rehabilitate Lease Transfer, RLT);
 - expansion - management - transfer (Build - Rehabilitate - Operate Transfer, BROT).
- Projects involving new construction (Green field projects): a private company builds and operates new production facilities within the period specified in the contract. The following types of such contracts are distinguished: 1) construction - lease - ownership (Build Lease Own, BLO); 2) construction - ownership - management - transfer (Build - Operate Transfer, BOT); 3) construction - ownership - management (Build Own Operate, SBI).
 - Partial privatization of assets (Divestiture): a private company acquires a shareholding in a state or municipal enterprise. Enterprise management can move to a private company or stay with the state.

Currently, the most common form of government-business interaction based on the principles of mutual risk sharing, co-financing of capital and operating costs on the part of the investor, as well as improving the quality of services provided through the involvement of market competencies is the concession agreement [3]. Under the concession agreement, one party (the concessionaire) undertakes, at its own expense, to create and (or) reconstruct property specified by this agreement (immovable property or immovable property and movable property, technologically related to each other and intended for carrying out activities stipulated in the concession agreement) (hereinafter the object Concession agreement), the ownership right to which belongs or will belong to the other party (concedent), to carry out activities using (e Operation) of the object of the concession agreement, and the grantor undertakes to grant to the concessionaire, for the period established by this agreement, the rights to own and use the object of the concession agreement for the implementation of this activity.

Since January 1, 2014, information on holding open tenders for the right to conclude concession agreements is subject to placement on the official website of the Russian Federation to post information about the bidding – www.torgi.gov.ru.

The specificity of this form of public-private partnership is to preserve the title of ownership of the object Agreement on the public side. Distinctive features of the concession as a tool for attracting investments in infrastructure:

1. The contractual basis of partnership in the long-term nature of cooperation, regulated by federal legislation.
2. The objects of concession are federal, regional or municipal property.
3. Possibility of payments of the concessionaire to the state for possession and use of the object (so-called concession fee) or structuring of concession transactions with the payment of the concessionaire.
4. Financial participation of a private investor in capital expenditures, that is, in the creation and reconstruction of a concession object.
5. Transfer to the private partner only the rights of possession and use, with preservation of the property right for the public partner.
6. Guarantees of the rights of the concessionaire, provided by the state.

Based on the foregoing, it is possible to highlight the key institutional advantages of the concession:

1. The clarity of the legal regime in view of the existence of the Federal Law «On Concession Agreements» regulating the procedure for preparing, concluding and executing concession agreements.
2. The existing practice of implementing concession projects at both the federal and regional and municipal levels.
3. Formation of a stable judicial practice with regard to the application of the provisions of the Federal Law «On Concession Agreements» (for example, with regard to the issues of pre-trial dispute resolution, the legal nature of the concession agreement, etc.).

The subject of the concession is the construction and (or) reconstruction of immovable or movable property, technologically interconnected, and intended for the performance of activities provided for by the concession agreement (operation). The possibility of using separate tools to attract financial resources, such as, for example, the issuance of concessionaire bonds.

An important stage in the operation of the concession mechanism is the monitoring and diagnosis of the results of the change in the object of concession relations in the process of implementing the concession project, which includes an assessment of the socio-economic efficiency of the implementation of the concession project. This assessment is carried out for the purpose of analyzing the compliance of the results achieved in the process of implementing the concession project, the conditions of the concession agreement and the goals set by the concessor.

The Grantor is the Russian Federation, on behalf of which the Government of the Russian Federation or the federal executive authority authorized by it, or the subject of the Russian Federation, on whose behalf the state authority of the subject of the Russian Federation acts, or the municipal entity on behalf of which the local government acts. Individual rights and obligations of the grantor may be exercised by the authorized concedent. A concessionaire is an individual entrepreneur, a Russian or a foreign legal entity, or two or more of these legal entities acting without the formation of a legal entity under a simple partnership agreement (a joint activity agreement) [4].

However, the introduction of PPP in Russia is not conducive to the corruption of the state apparatus at all levels of government, which prevents the establishment of trustful and

constructive relations with entrepreneurs. The business in Russia still remains in many respects an immature participant in the interaction with the authorities. At the same time, the social orientation of business, its interest in solving not only its private, but also national problems, is still not sufficiently developed. As large, and medium and small businesses demonstrate the desire mainly to profit, the redistribution of federal and regional budgets, government funds, and not to investing or otherwise participating in infrastructure projects that are of particular importance for the country's economy.

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Innovations as key drivers for the growth

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Abstract

The goal of the submitted paper is to analyse the importance of innovations for countries' growth. Innovations are the integral part of long-term developing of the countries and positively affect their growth. Therefore, the most countries pay specific attention for developing it as well as invest big capitals by creating research and development institutes, laboratories, universities and hiring skilled employees. The paper presents the theoretical aspects of innovations and their impact on countries' growth and development. Based on the analysis, it is recommended to pay more attention on innovations for improving countries' growth.

Keywords: innovations, developing countries, advanced countries, competitiveness, technologies

JEL Classification: O30, O13

1. Introduction

The term “innovation” is derived from Late Latin innovationem (nominative innovatio) and its meaning “a novel change, experimental variation, new thing introduced in an established arrangement” is from 1540s. Nowadays, there are many definitions of the term “innovation”. Searching for the term “innovation” in the internet related service “Google”, about 593 million results connected with this term are found. Based on Dictionary of Economics (Collin, P.H., 2003), innovation is “the act of developing something new, such as new form of product or service, which allows a firm to maintain a market position in advance of its rivals. It is the application of an invention to the commercial world”. As for the term “growth”, it is “the rate at which a country's national income grows over a period of time, usually shown as an increase in GDP or GNP or an increase in per capita income”. Countries differ in their growth rate. The more countries pay attention to innovations, the more countries increase their growth and become competitive. Moreover, the process of globalization provides an opportunity to communicate and cooperate among scholars, which also contribute to create new ideas and methods rapidly.

Many studies are conducted on the positive correlation between innovations and countries' growth. Arthur Lewis (1955) work focused on the on the necessity for countries to transform their structures from agriculture with a low productivity of labor, towards industrial activity with a high productivity of labor. Robert Solow (1956) stated that the countries' growth depended on capital, labor and innovations (ideas and new technologies). Walt Rostow (1960) argued that the economies should pass through several development stages: in the first stage, traditional society, dominated by agriculture and barter exchange, where innovations are not created, in the second stage, there are the development of education and science as well as their application to technology and transport, the emergence of entrepreneurs and banking system. In the third stage, the positive growth rates appeared in particular sector. In the fourth stage,

economy is diversified with growth in many sectors. Final stage represents the mass consumption per head. Zuzana Palkova (2016) presents examples of good practices when innovative business model helps to develop regional infrastructure and stimulate food economies. Ubrežiová et al. (2016) wrote about innovations from the viewpoint of corporate social responsibility in the selected business entities in Slovak Republic.

2. Data and Methods

It is difficult to quantify and assess the innovations of the countries in the world. However, the Global Innovation Index (GII) and the Global Competitiveness Report have measured countries' innovativeness. The Global Innovation Index (GII) has been ranking world economies since 2007. It measured 128 countries' innovativeness, which covered 92.8% of the world population and 97.9% of the world's GDP (in current US dollars) in 2016. The overall GI (the average of the Input and Output Sub-Index scores), the Input (institutions, human capital and research, Infrastructure, market sophistication, and business sophistication) and Output Sub-Indices (knowledge/technology and creative), and the Innovation Efficiency Ratio (the ratio of the Output Sub-Index score over the Input Sub-Index score) are calculated, each of them is also divided into several sub-pillars, which is 82 indicators in total.

Since 2005, building on Klaus Schwab's original idea of 1979, the World Economic Forum has published the Global Competitiveness Index (GCI) developed by Xavier Sala-i-Martin in collaboration with the Forum. The GCI combines 114 indicators that capture concepts that matter for productivity and long-term prosperity. Competitiveness is defined as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve. These indicators are grouped into 12 pillars: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and innovation. These indicators is also divided into sub-indexes. The GCI report 2016-2017 covered 138 economies, which covered 98% of world GDP.

Table 1: Comparison analysis of the GI 2016 and the GCI 2016-2017

Rank	Country (GI 2016)		Rank	Country (GCI 2016-2017)
1	Switzerland	→	1	Switzerland
2	Sweden	↗	2	Singapore
3	United Kingdom	↗	3	USA
4	USA	↗	4	Netherlands
5	Finland	↗	5	Germany
6	Singapore	↗	6	Sweden
7	Ireland	↗	7	United Kingdom
8	Denmark	↗	8	Japan
9	Netherlands	↗	9	Hong Kong
10	Germany	↗	10	Finland

Source: Author's development based on GI 2016 and GCI 2016-2017

Analysing the two indexes (Table 1), it can be seen that there is quite strong relationship between them. In both reports eight countries: Finland, Germany, Netherlands, Singapore, Sweden, Switzerland, United Kingdom, and USA are listed in the top of 10 countries. Switzerland takes first place in both indexes and it is considered as the most innovative and competitive country in the world. Denmark, Finland, Singapore, Sweden and Switzerland have relatively small populations compared the other countries in the table. Therefore, they have spent a quite large part of their GDP on research and development (R&D). In general, the more countries pay attention to innovations, the more countries increase their growth and become competitive.

The number of patent applications is also an indicator of countries' innovativeness. Based on the World Bank determination, patent applications are worldwide patent applications filed through the Patent Cooperation Treaty procedure or with a national patent office for exclusive rights for an invention - a product or process that provides a new way of doing something or offers a new technical solution to a problem. A patent provides protection for the invention to the owner of the patent for a limited period, generally 20 years.

According to the table 2, China patented 1101864 applications, while USA had 589410 applications in 2015. Interestingly, the patent applications in USA by non-resident (301075) is more than residents (288335). This country recruits scholars from outside, who make big contribution to create new ideas and innovations. Moreover, the process of globalization provides an opportunity to communicate and cooperate among scholars.

Table 2: Number of the patent applications in 10 selected countries from residents and non-residents in 2015

№	Country	By residents	By non-residents	Total
1	China	968252	133612	1101864
2	USA	288335	301075	589410
3	Japan	258839	59882	318721
4	Germany	47384	19509	66893
5	Russia	29269	16248	45517
6	United Kingdom	14867	7934	22801
7	Singapore	1469	9345	10814
8	Netherlands	2207	287	2494
9	Sweden	2038	390	2428
10	Switzerland	1477	446	1923

Source: Author's development based on World Bank Data, 2016

Gross domestic spending on R&D is defined as the total expenditure (current and capital) on R&D carried out by all resident companies, research institutes, university and government laboratories, etc., in a country. It includes R&D funded from abroad, but excludes domestic

funds for R&D performed outside the domestic economy. This indicator is measured in billion USD and as percentage of GDP (OECD, 2017).

Table 3: Top five countries by R&D spending in 2015

Rank	Country	Expenditures on R&D (billion USD)	% of GDP
1	USA	502.8	2.788
2	China	408.8	2.067
3	Japan	180.6	3.492
4	Germany	112.7	2.875
5	South Korea	74.05	4.232

Source: Author's calculation based on the Organisation for Economic Co-operation and Development (OECD)

By spending 502.8 billion US dollars on R&D in 2015, USA took the first place in the top five countries, which invested big capital on R&D. China has spent 2.067 percent of GDP accounting for 408.8 billion US dollars. South Korea contributed the highest percentage of GDP (4.232%) on R&D in the world. However, in terms of money volume it is on fifth place after USA, China, Japan and Germany.

3. Results and Discussion

Innovations generally require the big investment and raise a question how to spread more R&D in developing countries. Most of developing countries spend only a small part of their budget on R&D paying more attention on applied development. However, spending on R&D drives more innovations and gives impulse to economic growth. Therefore, there is need to stimulate and motivatescholars to generate more innovations. Cooperation and partnership developmentamong scholars, universities and research institutes also play important role in the creation of new ideas and innovations.

4. Conclusion

Innovations are the integral part of long-term developing of the countries and positively affect their growth.The more countries pay attention to innovations, the more countries increase their growth and become competitive.Therefore, the most countries pay specific attention for developing it as well as invest big capitals by creating research and development institutes, laboratories, universities and hiring skilled employees.

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Tatry mountain resorts, Inc. as a leader of innovated marketing in the area of tourism

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Abstract

Tatry mountain resorts, Inc. is the leading enterprise of tourism in Slovakia. It is a leader in the operation of mountain resorts and the provision of tourism services in Central and East Europe. As part of an innovative marketing company launched the product GOPASS. This is a personalized chip card that serves as a ski pass, water parks ticket or ticket to various events. This loyalty program won the international competition „The Loyalty Awards 2015“ in London in categories The best loyalty program in the Central and East Europe in the tourism sector and the best CRM (Consumer Relationship Management) in the Direct Marketing area. This paper focuses on the analysis and evaluation of the implementation of sales promotion GOPASS by B2B (business to business).

Keywords: B2B, CRM, GOPASS, Marketing, Sales promotion

JEL Classification: M31, M39, Z32

1. Introduction

Nowadays marketing interferes life of almost anyone, often without realizing it directly (Krafft, 2015) and definitely means more than just sell or promote. (Lam, 2015) A lot of activities such as customers' needs analysis, prediction of production, estimate of market potential, competition analysis, proposing new products, innovations, advertising activities and many others can be included among marketing activities. (Killian, 2015)

In an actual period of mass production and global competition not production of products but its successful launching on consumer market is relevant. (Pappas, 2016) So ability to realize manufactured quantity of products is of vital importance for the existence of each company. (Lam, 2015)

In realization of marketing activities also in tourist trade establishments it is very important to know thoroughly the needs of target market and then modify or adapt products or services due to their requirements. (Xiang, 2015) Since tourist trade establishments are considerably dependent on geographical environment the result of adequate marketing activities creates an assumption for proper selection of target market which will satisfy their needs in this environment. (Xiang, 2015) After detailed analysis of customers' needs and requirements it is possible to make market segmentation, i.e. divide the total market to specific homogenous groups of customers according to their common characteristics. (Saenko, 2016) Individual segments on a selected market have relatively the same needs, requirements, level of consumption and expectations and so it is possible to address them by common communication media and lines. (Killian, 2015)

The result of the above mentioned facts is that the core of companies marketing activities execution is orientation of all concerned subjects on satisfying visitors' needs and requirements aimed at profit making. (Bilgihan, 2015) Success of a company on market (also success of

tourist trade establishments) depends on their ability to identify and offer an ideal product (service), know potential visitors who dispose of free time, money and want to visit a specific destination, target market and encourage actual and potential visitors to visit the destination. (Fang, 2016)

1.1 B2B Marketing

Primary feature of B2B marketing realization is that a customer is not an individual but legal entity (company) and this fact essentially effects the whole buying process. (Tafesse, 2016) In B2B marketing the decision to buy a product or service is not dominated by a subjective feeling of buyers but measurable benefits offered by products and the price at which products are offered. (Karray, 2015) The segment of B2B customers is much narrower and mostly presented by particular companies supported by particular people while their market buying decision is rational and systematic. (Hillebrand, 2015) In realization of marketing activities on this market the rule is that less customers buy high quantity - in general this is the quantity which cannot be consumed by the customer or company itself. (Sheth, 2015) It is important to notice that this is not his primary intention either.

In relation to these customers it is a must to know their decision making process, i.e. who decides about buying, influences it and which factors are the most important for individual partners of this decision making process. (Hillebrand, 2015) So it is possible to conclude that establishment of long term relations especially at personal level seems to be the most effective marketing tool.

1.2 B2B Sales promotion

Sales promotion presents a set of marketing tools and procedures whose aim is to ensure product or service sale. (Hellman, 2005) In general it can be stated that to promote products sale companies utilize specific motivational tools and at the same time a special offer arises which is not a common part of primary process. (Siddhanta, 2014) Sales promotion in B2B environment presents short time stimulus whose aim is to support product or service sale and which is most frequently used in point of sale. (Hellman, 2005) Its success depends in a high degree depends on product/service attractiveness and promotional tools. (Kumar, 2016)

In most cases, however, sales promotion has only a short time effect, especially when companies want to achieve immediate growth of volume of sales. (Siddhanta, 2014) This fact encourages companies to invest high amount of their financial sources in sales promotion and due to it companies may attract new customers willing to repeat their buying based on this experience. (Lam, 2015) But practical examples confirm that long term effect of sales promotion does not almost exist. That is the reason why successful realization of sales promotion in a large extent depends on individual abilities to offer customers a product which they will use and from the long term point of view they will be loyal.

2. Data and Methods

The topic of submitted paper is aimed at introduction and specification of a product offered by Tatry Mountain Resorts (TMR) – GOPASS loyalty card. The authors paid attention especially to its sales promotion by B2B. The first part of the paper brings theoretical knowledge and information acquired predominantly from foreign authors who deal with the topic – Marketing, B2B Marketing and Sales promotion. Consequently, the authors analysed primary sources provided by the TMR company and introduced forms of product sales promotion by B2B.

3. Results and Discussion

Tatry Mountain Resorts (TMR) is the biggest subject in the sector of tourism in Slovakia. It is the leader in operation of alpine resorts and providing services in tourism in the Central and East Europe with the portfolio including the most important alpine centres, fun parks and regional hotels. Business activities of TMR are divided into three main segments:

- Mountains and fun parks – includes alpine resorts in the High and Low Tatras and Polish Beskydy, which offer 95 km of downhill runs, Aquapark Tatralandia, GinoParadise Bešeňová (TMR is a managerial and an assistant authority), Silesian fun park (PL) and complex services such as restaurants, ski schools, sport shops and renting and service of ski equipment.
- Hotels – the company owns and rents hotels located close to its resorts with the capacity of approximately 2,000 beds.
- Real-estate projects – development, construction and sale of apartments and commercial places and renting of hotels.

Product GOPASS can be characterized from the general point of view as a tourist card. Tourist cards include and connect marketing activities of subjects doing business in the area of final destination and their activities are usually coordinated by a managerial organization of final destination. These cards enable free of charge or discounted travelling by local means of transport. It also concerns the offer of catering organizations or entries to various events. Validity of a tourist card is strictly limited taking in consideration time and place. The following table shows specific features and differences of GOPASS online system.

Table 1: Specifications of the online GOPASS system

Online system GOPASS		System GOPASS	
		B2C	B2B
Attributes	User	Customer (tourist)	Owner (private, guest-house, hotel)
	Registration to the system	Online (after completing the form and confirming the registration on the website)	Assigned "log-in" after signing a collaboration agreement
	Products purchase	Guest	Landlord
	Products price list	Publicly available (online)	Non-public (wholesale)
	Payment	Payment card	Payment card – guest, landlord, invoice

Source: own processing

The reason of launching the loyalty card GOPASS was to make the position of TMR in the sector of tourism steadier. GOPASS enables clients to utilize services concerning tourist centres under more advantageous circumstances and conditions. One of the goals of GOPASS market launching was to introduce centralized management of relations with customers which links information concerning behaviour of all important customers in all TMR operations. By means of effective coordination of connections towards customers TMR finds out financial standing of individual customers. Thanks to this information it will be possible to set and determine communication, care, price level and action offer corresponding to this financial standing.

Uniqueness of GOPASS product is that TMR connected two levels, i.e. a system of loyalty and a medium which is at the same time a ski-pass. The product has a high potential value not only

on the Slovak but also on the foreign market. When being launched potential of selling, higher satisfaction of clients and consequent company profitability were predicted. From the marketing point of view segmentation of customers who utilize loyalty card GOPASS is important. Each group has different behaviour and their requests concerning individual areas of loyalty program are different as well. During a year there are four different types of customers in TMR and they are shown in the following table.

Table 2: Customer type

Customer type	Reason for visiting	Way to use holidays and cards
One-day customer	Aqua park visiting	A regular customer (family) is coming to a one-day stay, especially during summer holidays
One-day customer	Skiing or tourism using TMR means of transport	The use of ski resort offer is the goal of identification and subsequent rewards (the other behavior will be affected by target communication and lower cost)
Customer not housed in TMR hotels	Guests staying at the official facilities, receive a loyalty card as a benefit to their stay	The card serves as the key to registering for TMR's loyalty program
Customer housed in TMR hotels	A faithful and prominent customer group	Customers are included in the loyalty system where they collect the highest number of points, They will have very fast rewards points. (loyalty card receive automatically)

Source: own processing

The primary long term goal defined by the company is personalized care of customers at all “Touch points”, their differentiation and development of their long term relation with TMR. The secondary goal is to lock stable and site customers and increase company revenues. The second goal is presented by more frequent returns of customers to the Tatras and utilization of TMR services. Supported by a loyalty scheme, direct communication and particular motivating campaigns increase frequency of customers’ visits of the High Tatras and teach them to utilize complex TMR services. The third goal is to maximize stays of company clients and above all utilization of weak periods between main seasons and to cooperate with particular visitors of company stays so that they become regular guests and visitors.

To reach the goals the company had to solve three following areas:

- identification of customers and technical solutions of loyalty program
- to solve direct communication and interaction with individual customer
- to understand consumer behaviour
- segmentation of individual customers

With the aim to fulfil a long-term vision “*One card, one bill*” it was necessary to build and modify infrastructure which makes this comfort possible. Meeting the plan of one accounting point means generation of clear transaction ways, accounting relations, payment methods and effective coordination of connections to customers. Logical part of complex CRM program (customer relations management) supporting more frequent visits is the own loyalty scheme containing rewards for returning visitors. This scheme is an integral part of individual care of customers. Program of rewards thanks for their shopping in a form of discounts on other products and at the same time motivates them try new centres and operations.

TMR company prepared a contract concerning cooperation between the company and a specific accommodation provider. One of basic duties of the company after signing a contract is to enable the particular subject an access to GOPASS B2B online system. The company also

ensures blank GOPASS chip cards, marketing support in a form of leaflets and information emails. One of the most important duties of accommodation providers is to offer GOPASS only to officially accommodated guests (TMR, Inc. has the right to check it and use arrival-books) and to sell GOPASS products only during visitors stay. Since all the products are sold through GOPASS program, clients must be registered. This registration is realized by accommodation providers together with guests and a sales representative explains the whole procedure during personal appointment.

This cooperation brings benefits to both parties. TMR company fulfils the primary goal of GOPASS introduction – to increase visit rate of mountain resorts and aqua parks and support buying decisions of clients. The other aim is to increase the number of night-stays, because visitors can buy products at wholesale prices only if they stay during two more night-stays. The biggest advantage for a final customer is an opportunity to buy GOPASS chip card and a particular product (ski-pass, aqua-pass, cable-car tickets) directly at accommodation provider place at wholesale non-public price, because this price is better than the price in the ordinary shop or within on-line shopping. After arriving to a skiing centre or aqua-park visitors go directly through tourniquet and does not have to stand in queues at cashier desks. Thanks to buying behaviour customers get loyalty points which can be later used as a discount when buying other products. On the other side accommodation providers can modify wholesale prices. If he considers possibility to buy GOPASS directly and accommodation provider place as competitive advantage and customers choose this accommodation because of this particular opportunity, accommodation providers apply the wholesale price. If visitors arrive to a particular accommodation facility even they did not know this opportunity but appreciate assistance in on-line shopping, accommodation providers can charge online price (it is lower than in ordinary shops but higher than wholesale price) and they get margin for selling GOPASS. In both cases accommodation providers are motivated by TMR to increase their turnover for GOPASSES they sold. TMR, Inc. has developed a system of financial compensation depending on the value of products sold. In this way accommodation providers can get specific products for free or at better price not only for them but also for members of their families or friends. With the aim to identify benefits better they are shown in the following table.

Table 3: Benefits from GOPASS B2B collaboration

Landlord	Guest	TMR, Inc.
Exposure of the guest GOPASS card	No registration work	New communication channel
Space for creating ski / aqua packages	Obtaining the GOPASS card and the necessary information from the landlord	Guest registration by the GOPASS program
The possibility of purchasing a GOPASS card product at a non-public price	Purchase of GOPASS products at the hotel at a lower price than the ticket office at the resort	Tracking shopping behavior and communicating with a guest
Promotion of the landlord on TMR websites and advertising campaigns	The opportunity to use the services at the resorts immediately after purchase	Lightening treasuries in resorts during the high season
Specific access to the landlord	Saving time at checkout	

Source: own processing

4. Conclusion

Nowadays more than 250,000 clients do their shopping with GOPASS regularly. Deserts belong also to the company Price Wise, which brought the idea of the whole program. Its success is based on a client – skier, it means by ski-passes, but the card is successfully used in aqua-parks and in summer seasons to buy cable-car tickets. GOPASS authors permanently work to bring improvements of the card which should make its utilization easier for its holders. It concerns especially credit operations what in practice means that GOPASS becomes and functions as an electronic purse. Since the tourist card GOPASS connects various products and services of tourism it promotes the region of the High and Low Tatras and brings unique and attractive experiences.

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Digital Human Models Architecture

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Abstract

The design of workplaces and products continues to migrate from paper to the computer, where analysis accuracy, visualization, and collaboration utilities allow designs to be realized much faster and better than ever before. As the pace of this development accelerates with the increased capabilities of the software design tools, less time is spent on physical prototyping, allowing for shortened time- to-market for new products. Ergonomists, who in the past used the physical prototypes to perform human factors analyses, are now challenged to move the analysis into the virtual domain using new tools and methods. Usability, maintainability, physical ergonomic assessments, psychological perception, and procedural training are some of the human factors issues that might benefit from analysis prior to the first physical incarnation of the design.

Keywords: ergonomics, software models, digital, human models, architecture

JEL Classification: R30, R39

1. Introduction

Human models are varied in both their complexity and construction. Any mathematical representation of human structure, physiology, or behavior can be considered to be a human model. These models are typically quite detailed to allow the dynamic effects of individual muscle activation and contraction, and hypothesized neural control strategies, to be investigated. Moreover, this detail is typically focused on one part of the body, for example the lower extremity for gait analysis, or the upper limbs for investigation of movement control. In contrast, simple, sometimes incomplete, human forms are used in the investigation of cognitive models, wherein the human form acts as an agent to effect changes in its world. (Gore & Corker, 2000)

For physical ergonomics investigations in digital environments, the human models need to mirror our structure, shape, and size in sufficient detail to allow the figures to assume realistically the observed postures of actual individuals performing similar tasks. Such models typically consist of an underlying kinematic linkage system that closely parallels our own skeletal structure and an attached geometric shell that duplicates our surface shape. Today's human models have kinematic linkages that include from 30 to 148 degrees of freedom, depending on the detail provided in the hands, feet, shoulder, and spine. The joints are constructed to move like our own joints, with the appropriate number of degrees of freedom, and typically also have physiological limits on the range of motion. In more detailed models, the shoulder and spine are modeled to behave naturally, with the links moving in concert as the particular segment is manipulated. (Knapp, Archer S., Archer, R. & Walters, 2004; Chaffin, 2007; Dahl, Allender, Kelley & Adkins, 2000)

2. Digital human models

Digital human models are software models of the physical human in the form of an avatar, or virtual human. These models are intended to assist designers in testing the physical design of workspaces at an early stage. Current digital human models provide designers with tools for analyzing the physical design of workspaces in a virtual environment. These tools are limited in a number of significant ways. First, the models of human motion for predicting posture and movement are limited in capability. Digital human models are basically virtual manikins that must be carefully positioned in a reasonable posture by the designer. Some models currently in use allow designers to utilize inverse kinematics algorithms. These algorithms may have limited validity in predicting reasonable postures (Chaffin, 2007). Either the designer or the IK system may select erroneous postures that do not accurately represent likely postures in the environment. Given a vehicle interior, a designer must directly arrange the avatar in the seat in a plausible way with little assistance from the digital human models software. Any dynamic motion, such as reaching from the steering wheel to the center console, must be provided by the designer, potentially through the use of motion capture or by direct manipulation of the avatar. (Beno, Bozekova, Markova & Hatlar, 2010) Second, digital human models simulate only the physical attributes and capabilities of a human. The digital human models are an empty shell directed by the designer and the software toolset. It is not currently possible for a designer to place a digital human models into a vehicle interior and simulate the physical motion of the digital human models during the driving task. (Bullinger H., Breining R. & Braun, 2001)

Figure 1: Digital human models architecture



In the process of assembling a database of movements, the HUMOSIM group has captured data from over 200 subjects to collect almost 100,000 motion data sets (Chaffin, 2007; HUMOSIM Group, 2005). The database includes motions for reaching toward a target, transferring objects, reaching and grasping objects, looking toward points, exerting force on handles, and pushing buttons. The continuously expanding database provides real motion capture data to provide a foundation for the development of models capable of predicting motion. There are two methods for predicting motion under development within the HUMOSIM group. The primary method, functional regression analysis – can predict joint angles during the motion of a hand toward a target in terms of inputs such as the stature, age, and gender of a subject. The technique was used to compare the relative importance of stature, age, and gender in seated reaching motions. The second method relies more directly on the motion database. The motion modification method, searches the motion database for “root motions” that can be analyzed and modified

slightly to create a desired motion. Both methods are potential tools for creating dynamic human models capable of predicting valid postures and motions for ergonomic analyses. (Bullinger H., Breining R. & Braun, 2001; Duffy, 2005; HUMOSIM Group, 2005)

The A3I Program was initiated in 1985 to support exploration of computational representations of human-machine performance to aid designers of crew systems. The major product of this effort was a human factors computer-aided engineering system called MIDAS (Man-Machine Integration Design and Analysis System). MIDAS is intended to revise the system design process in order to place more accurate information into the hands of the designers early in the process of human engineering design so that the impact and cost of changes are minimal. It is also intended to identify and model human-automation interactions with flexible representations of human-machine function. The crew station development process, as it is currently undertaken. The design proceeds from requirements and capabilities in conceptual design through increasing specification to hardware and software prototypes and simulation tests. Human performance evaluation occurs after prototype design and development. Results from testing the prototype are then used to guide prototype redesign. (Bullinger H., Breining R. & Braun, 2001; Atencio, Shively & Shankar, 2002; Dahl, Allender, Kelley & Adkins, 2000)

MIDAS is intended to meet these challenges by including the following characteristics: (Atencio, Shively & Shankar, 2002; Wickens, 2003)

- **Modifiability and manipulability:** The basic mode of operation for MIDAS users is to explore the impact of changes to the baseline design. Thus, the capability for systematic change is critical. Of equal importance is system extensibility. To be generally useful, the modeling environment should be applicable to many types of design changes, and to many operational domains. The MIDAS architecture is designed to allow extensions of this type with minimal disruption to the existing core MIDAS system.
- **Transparency:** The analysis system must provide designers with explicit and transparent reference to the rules, decision-making strategies, heuristics, and assumptions under which the human-machine system is assumed to be operating, as well as predicted performance.
- **Dynamic analysis capability:** The simulation system must produce a stream of behavior in the form of dynamic timelines describing not only its state and structure, but also sequences of action over time and contingent responses of the human/ system behavior. The system must support testable hypotheses. Designers must be able to analyze the events occurring in a simulation scenario and relate this performance to man-in-the-loop simulation data. In MIDAS, each action taken, decision made, and communication event is logged by the analysis system. (Turisová & Svetlík, 2014)

3. Conclusion

The structural architecture of MIDAS is that of a federated set of models organized into groupings that represent the various agents in the simulation. We will concentrate here on the structural integration of the models that compose the human operator(s) in the MIDAS modeling system. These models have been developed in a structure that represents an empirically based human information processing model. This structural integration has been termed a first-principles model, based on its intentional integration of cognitive models that represent separable elements of the cognitive process. The first-principles models of human performance are based on the mechanisms that underlie and cause human behavior. First-principles models integrate human perceptual and cognitive systems and human motor systems, thus incorporating the higher-level behaviors that are characteristic of human performance. This

incorporation supports emergent human behavior based on elementary model function. (Atencio, Shively & Shankar, 2002; Dahl, Allender, Kelley & Adkins, 2000; Wickens, 2003)

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Innovation Management in The Polish SMEs sector

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Abstract

Innovation is one of the basic elements of the organization progress. It is seen as a way of strengthening a long-term development trend and generating a competitive advantage (Gródek-Szostak & Kajrunajtys, 2010). Effective management of the innovation process, providing tangible results in the form of developed and implemented innovation, builds the value of the company and is the source of its development. Small and medium-sized enterprises in order to be competitive, should create and implement innovations in line with market needs. The article presents general information on innovation management in enterprises and ways of supporting innovation of Polish enterprises. It contains results of research on innovations, conducted in small and medium-sized enterprises of Polish construction industry. All of enterprises participating in the study operate in the Silesian Voivodship and conduct their business for more than 10 years.

Keywords: Innovation, Management, Innovation management, Construction Industry, SME's

JEL Classification: M21, O32, O52

1. Introduction

Innovation of the economy, according to the OECD (Podręcznik Oslo, 2008), is the ability and motivation of entrepreneurs to conduct scientific research which improve and develop production and to seek new ideas, solutions or concepts. Innovations in the economy lead to new products creation, to technology improvement, the increase of efficiency and thus the competitiveness of the economy towards other countries. Innovation is often measured by the amount of innovations introduced and the amount of effort required for these activities. It is strictly connected with resources, but also the ability to use them, that is to say innovative maturity (appropriate level of organizational culture, conditional on the use of resources held) (Niedzielski, 2005).

2. Innovation management in enterprises

Innovation is the implementation of a new or significantly improved product, service or process in the economic practice, including the implementation of a new marketing or organizational method that redefines the way a company operates or interacts with its surroundings. Introducing innovation gives the company a dominance, because (at least in the beginning) it will be the only provider of innovative solutions (Pachura, 2012, pp. 128-135 and Krause, 2016, pp. 101-109). To succeed in changing market, every company must constantly look for new, creative ideas. The ability of effective acquisition, innovation is at the moment a key success factor for any business, regardless of the industry.

From the entrepreneur's point of view, based on Business Center Club research, innovation is understood as (Pomykalski, 2008):

- measurer of the level of development and activity of an enterprise,
- measurer of the quality of company management and professionalism of employees,

- measurer of the level of enterprise modernity and carrier of the progress,
- imperative of running a company in a competitive economy,
- association with a well-functioning company.

In enterprises, there are four main areas in which innovation processes may occur, and they are: developing new products, introduction of new technologies, introduction and development of new organizational forms and new markets discovering or creating. The types of innovation corresponding to the above areas are (Drucker, 1992):

- product innovations,
- process innovations,
- organizational innovations,
- marketing innovations.

The ability to create and absorb innovation makes the company the innovative one, which is creative and continually has the ability to adapt to the changes dictated by the environment (Janasz & Kozioł, 2007). Information on the emergence of innovation is constantly flowing inside and outside the enterprise (corporate, business environment). This information flow allows for an ongoing analysis of reality and the experience of many environments. The assessment of innovative processes, taking place in the industry, can be carried out on two levels: business and corporate environment (Innowacje, 2017). Indicators related to the company are: share of innovative companies among all industrial enterprises, expenditures on innovative activities in enterprises and share of sales value of new and modernized products launched on the market during the last three years in total sales value in a given year (Ministerstwo Gospodarki, 2000). Key indicators for innovation processes in the business environment are (Innowacje, 2017):

- share of gross expenditures on R & D in GDP,
- trade of high technology products of an economy with foreign countries,
- balance of payment in the field of technology,
- number of patent applications.

The determinants of enterprise innovation are divided into external factors of the business environment and internal factors. Factors in the corporate plane are the group of internal factors and include social, material, legal, organizational and strategic issues. External factors from the company's environment can be divided into macro- and micro-environment factors. In their overall distribution one can distinguish: society, economic policy (country, economic communities) and market. Internal factors are divided into three basic groups: a group of factors related to the strategy and organization of the enterprise, a group of factors resulting from the personal characteristics of the entrepreneur and employees and a group of factors related to market analysis (Sosnowska et al., 2003).

One can also find various criteria distinguishing innovative companies. They are both qualitative and quantitative. The first group includes, among others (Sosnowska et al., 2001):

- staff (level of qualifications and skills of employees, their achievements, motivation for innovative activities),
- products (degree of their modernity and quality, their marketing value and the chance of success),
- technologies (their modernity, environmental performance, technical and economic indicators),

- infrastructure (level of equipment in research and technical infrastructure and level of computerization).

Among the quantitative factors most often one distinguishes (Sosnowska et al., 2001):

- number of new products implemented in a given year,
- share of new products and technologies in the annual sales value of the company,
- participation of employees with higher education in relation to other groups of employees,
- number of patents obtained in a given year,
- share of basic products in the world market,
- number of employees with a scientific degree,
- share of expenditures on research and development in a given year to sales value,
- number of licenses sold,
- number of purchased and used foreign licenses.

Innovation management assumes the formulation and implementation of enterprise innovation strategy. It is a search for resources based on the kind of innovation that makes the innovation process more effective in confronting the challenges faced by the organization, market, competition or customer (Fidlerova & Fidler, 2008 and Lis et al. 11-14). Innovation management requires a learning process in the company that must be supported through: exchange of experiences within the company and its surroundings, the use of appropriate tools and techniques, strengthening the network of cooperation within the company, as well as its surroundings (Pomykalski, 2001). A company which overarching goal is long-term development must comprehensively approach to innovation management and focus on areas identified within the pyramid of innovation, such as (Diedrichs et al., 2006):

- organization and culture - flexible organizational structures enabling the development of collaborative networks (internal and external) and a pro-innovation culture oriented towards information transfer and knowledge,
- innovation strategy - defining innovative goals and ways to achieve them,
- innovation life cycle management and continuous improvement of generation, development and commercialization of innovative projects,
- harmonization and optimization of key factors operations.

3. Supporting innovation of Polish enterprises

According to official statistics of the European Commission, Poland is currently one of the least innovative countries in Europe. In the financial and tax sphere one can see the weakness of the Polish economy measured by the level of its innovativeness - the tax advantage ratio for innovative technology investments in Poland is more than 100 times lower than in the UK. R&D expenditure is still below 1% of GDP, which puts Poland below the EU average, and is a significant barrier to the growth of innovation of the domestic economy (Pachura, 2012).

At the local level, innovation-enhancing measures are particularly effective by supporting small and medium-sized enterprises (eg, stimulating of clusters development). An important feature of locally developed innovations is their differentiation resulting from different resources and different needs in different regions (Grabara, 2014, pp. 27-39 and Czarniewski, 2016). Regional innovation councils affect the directions of the regional innovation development (advisory bodies of entrepreneurs, universities representatives and chambers of commerce, etc.)

The great opportunity for the development of innovation in Polish companies are the EU funds. In the years 2014-2020, it is the entrepreneurs who will be the biggest beneficiaries of EU funds

(besides local governments). From the EU Structural Funds, which were granted to Poland for years 2014-2020, 20 billion Euros is for companies opting for innovations. The greatest support is provided for micro, small and medium-sized enterprises (Portal Funduszy Europejskich, 2017). The grants for them were provided primarily in Regional Programs of particular voivodships, but also from the Operational Programme Intelligent Development and Operational Programme Eastern Poland.

4. The research methodology and the research results

The research on innovation of polish small and medium-sized enterprises of the construction industry was conducted in 2016 with the use of the questionnaire survey. The enterprises were chosen in a targeted way, in the study took part enterprises of the construction business employing between 10 and 249 employees, present on the market for more than 10 years. Their main activity is the production and sale of building materials and they have their headquarters or representative offices in the Silesian Voivodeship. It was one-off survey, the questionnaire was sent to the enterprises via e-mail. In total, the survey questionnaire had 5 questions. The first question was about the size of the enterprise, another four concerned the perception of a company needs in terms of innovation and barriers of innovations.

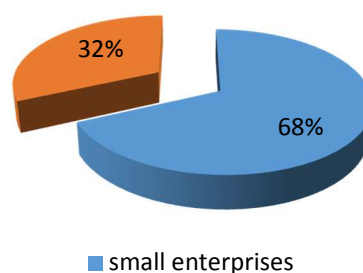
An important role in managing innovation in a company play managers, therefore, the survey was addressed to the representatives of this group.

The purpose of the study was to determine the enterprises approach to innovation, the need for innovation, already implemented innovations, the aim of innovations and the perceived obstacles to innovation in polish SME's of construction industry. Questionnaires were sent to 52 companies, of which $n = 31$ enterprises returned them filled in correctly.

Nearly 70 percent of the surveyed enterprises (21 enterprises) were small companies employing between 10 and 49 people, 32 percent of enterprises (10 enterprises) were medium-sized, employing between 50 and 249 people.

Figure 1 shows the percentage of enterprises participating in the survey, taking into account their size

Figure 1: Percentage of respondents, taking into account the size of the company they work for

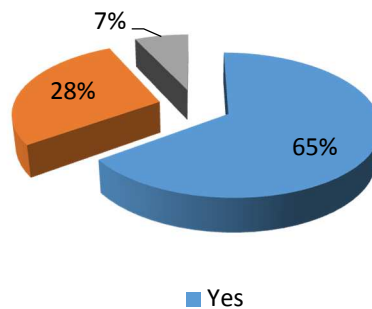


Source: Own elaboration

As shown in figure 1 the majority of survey respondents were employees of small enterprises (68 percent), 32 percent of them were employees of medium-size enterprises.

Figure 2 refers to a need for innovation in the enterprise.

Figure 2: Opinion on the need for innovation in the company

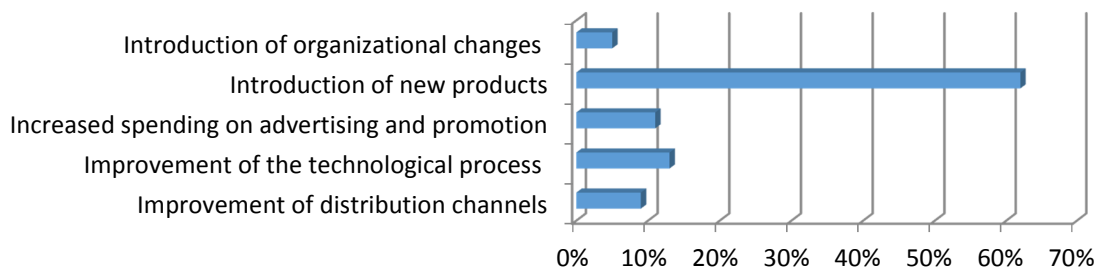


Source: Own elaboration

As is apparent from figure 2, most of respondents are of the opinion, that in their enterprise here is a need for innovation (such response gave 65 percent of respondents). 28 percent of managers answered in their enterprise is no need for innovation, 7 percent of respondents have no opinion about the need for innovations in their enterprise.

The next figure refers to innovations already implemented in the enterprise.

Figure 3: Innovations implemented in the company

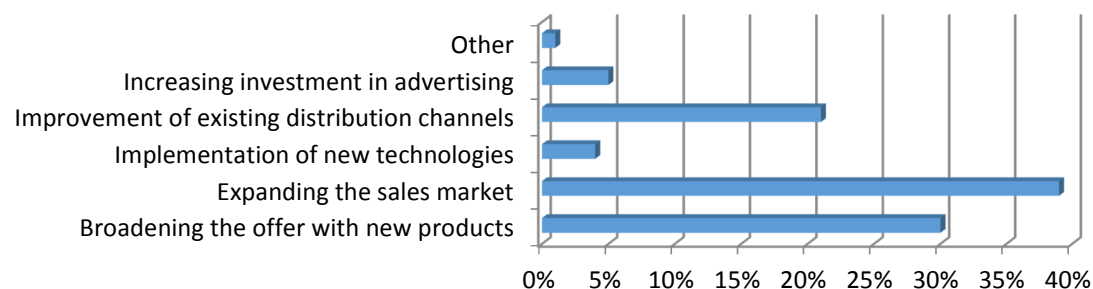


Source: Own elaboration

As shown in figure 3, the most frequent innovation in polish construction companies of the Silesian Voivodship, is the *introduction of new products* (chosen by 62 percent of respondents). The next places were taken by *improvement of technological process*, *increased expenses on advertising and promotions* and *improvement of distribution channels*, which were selected respectively in 13 percent, 11 percent and 9 percent of respondents. Innovations in the field of organizational changes were implemented only by 5 percent of respondents.

Figure 4 refers to the aim of innovations in the enterprise

Figure 4: The aim of innovations in the enterprise

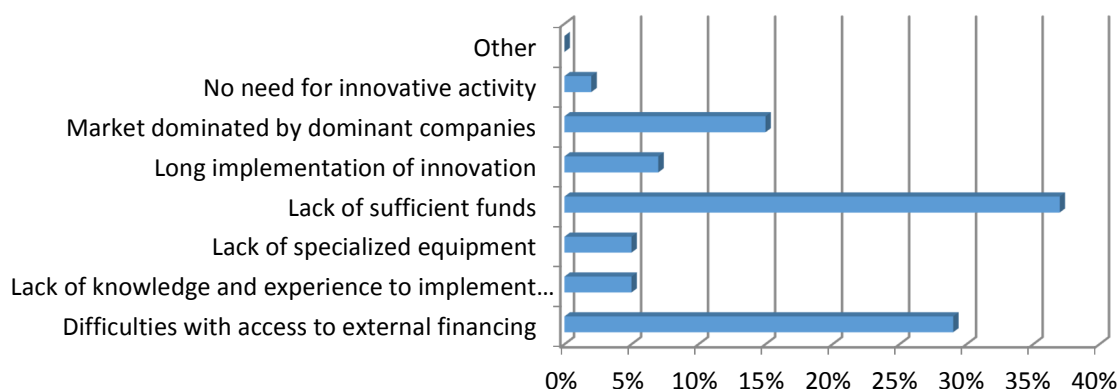


Source: Own elaboration

As it is shown in fig. 4, the aim, mostly chosen in surveyed enterprises was associated with expanding the sales market, such an answer was chosen by 39 percent of respondents. The next three places were taken by: introduction of new products, improvement of distribution channels, and increasing investment due to advertising and promotion. One percent of responses chose the answer "other" but unfortunately no answer was given about what specific investments they were.

Figure 5 presents a graphical illustration of the responses received to the question on barriers of innovation in enterprises

Figure 5: Obstacles to innovation in an enterprise



Source: Own elaboration

As shown in figure 5, insufficient funds and difficulties with access to external financing are the obstacles mostly chosen by respondents (these replies received accordingly 37 percent and 29 percent of managers). 15 percent of respondents declared that a large barrier to innovation is the market dominated by dominant enterprises. The least chosen were: no need for innovations (2 percent), lack of knowledge and experience related with implementing innovations as well as lack of specialized equipment (5 percent each).

5. Conclusion

The importance of innovation for the competitiveness of enterprises has increased in recent years. Businesses, when assessing their own achievements and setting future business goals, take into account both their own situation as well as the market situation, so the factor of the immediate market environment is always taken into account when developing business plans and innovative strategies (Bajdor, 2017). Employees of the surveyed companies are aware of the importance of innovation in shaping the market position of their companies, and innovative undertakings are the key factors in their future development. The results of the research show that managers are aware of the need for innovation in enterprises they work in. According to their opinion innovations are most often introduced in the field of new products launching. The main aim of the innovations in the surveyed enterprises was associated with expanding the sales market, while as the most significant barrier of innovation in enterprises, the respondents chosen lack of sufficient funds.

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The Influence of Contextual Factors on Healthy Food Consumption among Consumers

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Abstract

Currently Food consumption patterns have changed and many people and households eat away from home in hotels, restaurants and fast food outlets. Many consumers are not aware of contextual factors such as, social interaction during meal times, the salience of food, easy accessibility of food and increase in variety of food which have a lot of influence on their food consumption patterns. Although they might look unrelated they influence consumption by inhibiting consumption monitoring and suggesting alternative consumption norms. The objective of the study is therefore, is to ascertain the influence of contextual factors on food consumption. The findings of this review will be valuable to consumers in the food service industry as it will create awareness and sensitize them against unknowing over consumption. Food outlets can also acquire knowledge on the influence of these factors, hence leading to better competitive advantage in comparison to their competitors.

Key words: contextual factors, healthy food, consumption, consumers

JEL Classification: M11, M30

1. Introduction

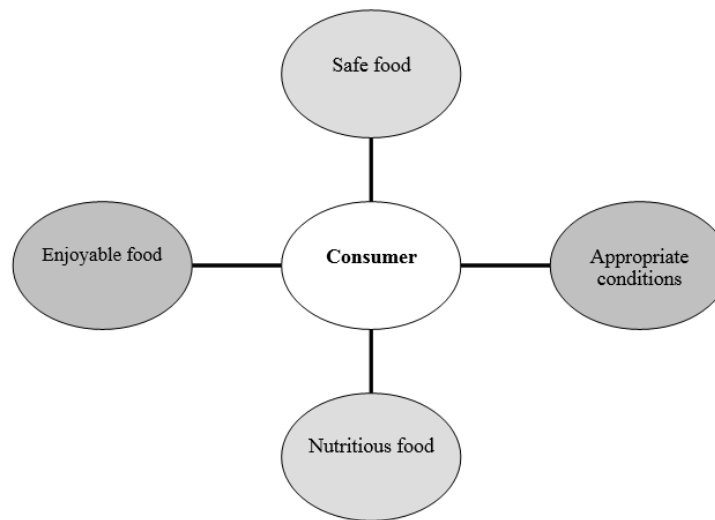
Currently there are increased sensitization efforts by governments, food manufacturers and international organizations to provide consumers with healthy meals (WHO, 2012). Consequently many consumers are more health conscious and majorities are making healthy food choices (WHO, 2014). On the other hand, in recent years, due to the increased availability of food service establishments and them try to gain competitive advantage over each other, the food service industry has totally evolved (Bradford, 2000). With major improvements have been made regarding entertainment, comfort, convenience and food quality among others, this is with regards to create a more welcome and homely environment for clients (Wansink, 2004).

According to (Wansink, 2004) food consumption patterns may be influenced by contextual factors in the eating environments which include, eating with company, watching television, salience of food, availability of variety, and serving equipment among others. A study conducted by (Wansink, 2004) showed that the closer an individual is to a food source; the more likely it is consumed in the diet, as proximity facilitates food visibility, causing an increase in hunger and hence temptation. In adults, proximity, visibility, convenience and accessibility of food greatly influenced their food consumption (Davis & Carpenter, 2009, Laraia, Siega-Riz, Kaufman, & Jones, 2004; Mooney, 1990). According to Rolls (1982) emotions arising about food, influenced by personal, cultural, past experience and anticipated consequences can be translated into pleasurable or unpleasant feelings about that particular food. The objective of the study is therefore, is to ascertain the influence of contextual factors on food consumption.

Antoine (2014) pointed out that consumers of the food industry require products that may fulfil four main expectations: two are based on immediate practical criteria, namely sensory characteristics such as taste, texture, smell, appearance, and the service itself, i.e. handling,

storing, easiness to prepare, correct labelling. Two other expectations are based on experience and other criteria, such as safety, satisfaction or nutritional needs. Dunay et al. (2015) adapted the expectations of consumers towards catering services using the original idea of Antoine, they highlighted that food shall be enjoyable, the conditions (i.e. atmosphere of the place) shall be appropriate, and the food shall be safe and nutritious for all consumers (Figure 1).

Figure 1: The four basic expectations of consumers with catering services



Source: Dunay et al. (2015)

The proper food producing and food handling processes may satisfy the basic expectations of the consumers. Tóth and Bittsánszky (2014) and Tóth et al. (2017) underlined the role of knowledge and the experiences of food handling staff, as they can add an additional value (e.g. by providing appropriate atmosphere, serving practices) which need only a limited amount of resources, it is based mostly on the helpfulness and tastefulness of the food handlers.

2. Contextual factors

The eating environment refers to the ambient factors associated with the eating of food, but that are independent of food, such as atmospherics, the effort of obtaining food, the social interactions that occur, and the distractions that may be taking place (Wansink 1996). The immediate eating environment such as lighting, odor and noise, that influence the immediate eating environment, has a more indirect or mediated impact on consumption (Westerterp 1999). For instance, Herman et al., (2003) through the theory of social facilitation found that the amount of food an individual consumes during a meal is potentially evaluated and guided by others that are present. An increased amount of food is eaten at meals with family and friendly people, basically, because they can help make a meal relaxing, more enjoyable, and prolong the eating period (Wansink 1996, Lehota et al, 2015a). Sommer (1969) observed that dimmed or soft lighting could influence consumption by increasing eating duration or by increasing comfort and dis-inhibition. Bright illumination of light is said to decrease length of time people stay in a restaurant whereas soft or warm lighting generally causes people to linger and enjoy an unplanned dessert.

The immediate eating environment such as lighting, odor and noise, that influence the immediate eating environment, has a more indirect or mediated impact on consumption (Westerterp 1999). People will tend to consume more foods during prolonged cold temperatures than during hot temperatures (Brobeck, 1990). Depending on the type of atmospherics under

study, atmospherics are also believed to increase consumption volume partly because they make it comfortable or enjoyable for a person to spend more time eating for example. Odor influences food consumption through taste enhancement or through suppression. Unpleasant ambient odors are likely to shorten the duration of a meal and to suppress food consumption (Rozin 1982). Satiety occurs within a reasonably short time by simply testing or smelling of a food which suggests that although odors can have a depressing impact on consumption, they might not necessarily increase consumption (Stevenson et al., 1999)

2.1. Consumption Monitoring Accuracy

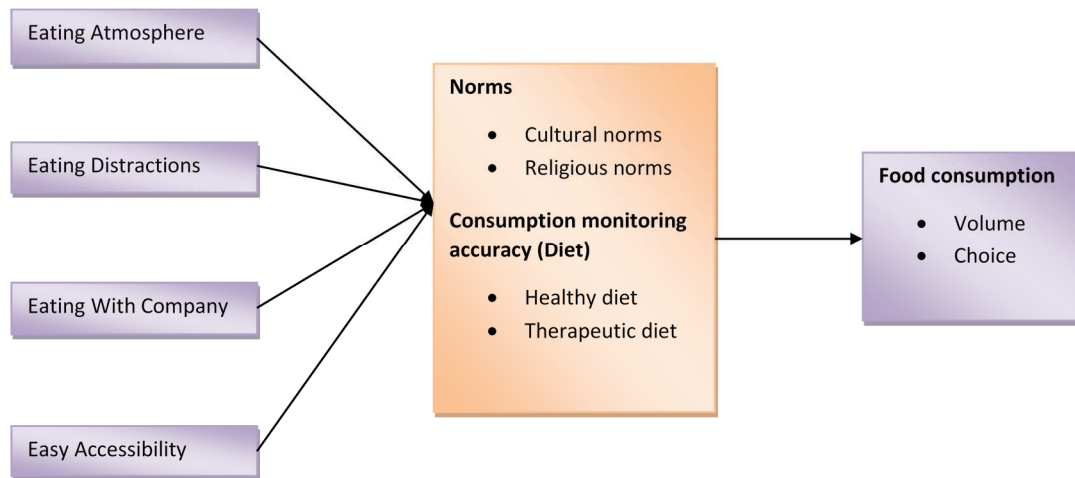
According to a review by (Brian, 2004), closely monitoring how much food one consumes reduces discrepancies between perceived and actual consumption. A distracting environment can reduce a person's ability to accurately monitor how much they eat (Polivy, 1986), and may lead them to over rely on visual cues such as the fill level in a bowl to determine when to stop eating. Overreliance on such visual cues may lead consumers to over consume because they ignore other factors like amount of food eaten or the feeling of satisfaction. For example, studies have shown that a person intending to eat half a bowl of soup, may use the amount of soup left in the bowl as a visual cue that indicates whether he or she should continue eating or should stop. If that cue is inaccurate, it could unknowingly lead one to overeat (Brian, 2004). An individual's sight may influence how much they consume, leading them to be less influenced by physiological cues of satiation. As a result, their estimate of how much they have consumed and how sated they are may have to do more with what they believe they saw themselves eat and less with how much they actually ate (Wansink, 1996; Lehotka et al., 2015b).

2.2. Food Consumption

In societies where food supplies, safety and nutrition are relatively adequately provided for by most major manufacturers, other issues relating to the food consumption have also grown in importance (Sparks 1994). An aspect that is often overlooked is that, consumers like to enjoy their foods as many foods are consumed almost entirely for the pleasure value they impart. For example, products like coffee, chocolate, ice cream and alcohol are often consumed to enhance positive states of mind, or to reduce the effects of the negative ones (Rolls, 1996).

Individual food consumption is influenced by a wide variety of environmental and individual variables. The three main dimensions related to food consumption are taste, perceived value, which includes price and portion size and perceived nutritional benefit (French, 1999). Foods vary along each of these evaluative dimensions. In general, people may possess knowledge about healthful food consumption, but when considered in tandem with the dimensions of price and taste, they may choose to consume the tastier and cheaper, but less nutritious food.

Food also represents whom and what we are (Lyman, 1989). For instance, some people use food to help cope with stress by overeating or depriving themselves. Others express their creative side by serving dinner guests, as well as expressing their awareness and appreciation for others. Special meals and foods such as birthday cakes encourage bonding and foster relationships around the dinner table and at celebrations, Food may also be used as a reward for accomplishing a specific goal (Chaiken, 1990). Consequently, what people eat can reveal much about who they are socially, politically and religiously.

Figure 2: Food Consumption Conceptual Framework

Source: adopted and modified from Wansink (2004)

Figure 2 shows the study model adopted from Wansink (2004) with modifications to suit the current study. The eating environment addresses those factors that are associated with the eating of food, but are independent of food. They include eating atmospherics, distractions while eating, eating with company and easy accessibility of food. The eating environment influences consumer food choice and consumption volume in the food service industry. Intervening variables, norms and the consumption monitoring accuracies (diets), Norms include factors such as cultural and religious norms which are forms of social control over human behavior and that tend to mediate food consumption. Consumption monitoring accuracies are visual cues that lead a person to estimate how much they have consumed, and tend to also mediate food consumption. Lastly, food consumption varies among consumers depending on different situations where, either independent variables or the intervening variables will be in play.

3. Conclusion

Consumption is a context where understanding fundamental behavior has immediate implications for consumer welfare (Cutler, 2003). People are often surprised at how much they consume (Wansink, 2003), and this indicates their consumption may be influenced at a basic level of which they are not aware or do not monitor. This is why simply knowing these environmental traps exist does not typically help in avoiding them. Relying only on cognitive control (Boon, 1998) and on willpower (Pliner, 2003) often yields disappointing results. Furthermore, consistently reminding individuals to vigilantly monitor their actions around food is not realistic (Lowe, 1993). At best, continued cognitive oversight is difficult for people who are focused, disciplined, and concentrated. The environment can work for people or against people. On one hand, it can contribute to the overconsumption of food by unknowing individuals. On the other hand, a personally altered environment can help individuals more effortlessly control their consumption and lose weight in a way that does not necessitate the discipline of dieting or the unintended consequences of external intervention.

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Theoretical and methodological problems of economic awareness analysis

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Abstract

The aim of this article is to analyse theoretical and methodological concept of economic awareness, and then to show usefulness of this concept in empirical research. The concept of economic awareness is being defined as follows: "It's a way of thinking and the attitude of man to economic reality. The economic awareness should include such elements as economic knowledge, value system and economic aspirations, work and entrepreneurship, the attitude towards wealth and poverty, attitude towards money and thriftiness, and consumption." In further part of the article every element of this concept will be analysed. The analysis will be based on literature on the subject and empirical research. Afterwards methodological problems which are connected with economic awareness research realisation will be presented. This part of article will be based on conducted analyses over economic awareness of Polish society and newest researches on the young generation of the Visegrad Group countries. In the conclusion the perspective of economic awareness research will be formulated.

Keywords: analysis, economic awareness, theoretical and methodological problems

JEL Classification: M20, M29

1. Introduction

The economic awareness is part of the wider economic culture. The relationship between awareness and the economy is more often pointed out by sociologists than economists. This is explained primarily by the fact that sociologists often involved in awareness and culture, i.e. soft data. Economists are trained in the use of quantitative data, which is not conducive to wake sensitivity to cultural data. The interests of sociologists and economists on research concerning culture, including the awareness of economic societies, are revived when economic growth begins to accelerate in some countries or regions and is not always possible to explain these phenomena only through known models. Only then does research on other factors, including cultural factors, begin to play an essential role. The aim of this article is to analyse theoretical and methodological concept of economic awareness, and then to show usefulness of this concept in empirical research.

2. Concept of economic awareness

The concept of economic awareness is difficult to define, because it can cover a lot of components. Generally the definition is not presented, but the concept is operationalized and empirical research is being realized. Research on economic awareness oscillated around problems about acceptance and polish society adjustment to conditions of market economy. Problems which were analyzed are: various aspects of the economy functioning, pace and direction of economy development, rate of budget deficit, economic role of state and social justice, roles of companies as a factor of country development, source of state and borough incomes, corporate social responsibility, consumer behavior, motivation to own business activity and legitimization of the socio-economic system in post-crisis period (Kolarska-Bobińska 2004, Zagórski & Strzeszewski, 2000, Koźmiński & Zagórski 2011, Zagórski &

Koźmiński & Morawski & Piotrowska & Rae & Strumińska-Kutra 2015). The analysis of society economic awareness included also the image of business, which consisted of not only the opinion about private businesses but also about their owners. Therefore, the spectrum of undertaken problems were very broad. The objective economic situation indicated in which direction the research on economic awareness will be realized, instead there was less interest in how to define and operationalize that concept.

Grażyna Krzyminiewska has tempted herself to define very similar concept by exploring the economic culture of rural youth and its importance to the socio-economic development of rural areas (Krzyminiewska 2010). For the needs of her research she defined the economic culture which consisted of: economic socialization, attitude toward money and saving, consumption, economic aspirations, assessment of social reality, value system, abilities, economic knowledge, attitude toward work and entrepreneurship (Krzyminiewska 2010: 23). Economic awareness is one of the elements of economic culture. This is an approach that is useful in sociological research where the concept of awareness plays a big role. This is why for needs of future sociological research concept is understood as follows: "It's a way of thinking and the attitude of man to economic reality. The economic awareness should include such elements as economic knowledge, value system and economic aspirations, work and entrepreneurship, the attitude towards wealth and poverty, attitude towards money and thriftiness, and consumption. Individual elements of defined concept will be showed below.

3. Elements of economic awareness

Economic science is very much needed, not only to function in daily life, but also to understand the problems of the contemporary world. Economic knowledge translates into decisions about work, entrepreneurial and activation behavior. Economic knowledge is one of the elements of a knowledge-based economy. It testifies about the competence of civilization, the lack of which may exclude an individual from social life. An even more difficult problem is the orientation in the emerging economic problems as the global economic crisis, the scale of globalization, the role of corporations, and factors of economic inequality (Kowalczyk 2014)

Understanding the value system is very important because it determines life aspirations. Sociologists treat aspirations as determined by the goals and hierarchies of values, the individual tends to socially approved goals, which gives a subjective sense of achievement of positive change within the accepted range of values that appear and shape the course of social life (Lalak & Pilch 1999: 24). Aspirations depend on self-recognition, self-esteem and self-determination of an individual, and also on the social situation. If an individual accurately determines their social role, they will also be able to define their aspirations. It is worth noting that aspirations are long-term pursuits and goals which the individual seeks, e.g. starting a family, acquiring a specific position or profession. Aspirations are therefore pursuits of an individual, motivated the possibility of their implementation. Sociologists focus on objects of aspirations. Economic aspirations would affect the material conditions of future living as wages, standard of living, collected goods, purchasing a house or an apartment, or a car of a certain brand. Implementation of material aspirations is most often associated with getting properly paid employment and independence from parents. Self-confidence in their implementation is linked with professional aspirations. Realization of their plans, hard work and setting new challenges are factors of life success and fulfillment of aspirations.

Work and the members' of society attitude towards it is an essential element of economic success. Work is and has been a source of concern to many such as praxiology sciences, economics, philosophy and Catholic social teaching. The sociological definition of work draws attention to the social aspects such as aspirations, attitudes, structure and culture of the groups.

The important element is the integration of the group while working, resulting in specific professional roles, transferred to another plane of social life: "Work is a social activity, professional and non-professional, focused on meeting the needs of people. In the course of performing their work individuals coordinate their behavior and come together in cooperation. Through the process of the work, the structure of the group is created and there is a process of integration. In connection with its implementation they develop values and standards" (Swadźba 2001: 22). Work in this sense would have a functional character and understanding will apply to both professional and non-professional work. The activity of the subjective factor is very important, because what for someone is a job for another job is not. In relation to work different assessments can be formulated. Sociological studies on work often focus on its value. Work is usually a positive value due to the existential aspect, but also self-realization and creative aspects (Swadźba 2014).

Entrepreneurship is a great driving force of economic development. The development of entrepreneurship is understood as encouragement for initiative and creation of conditions for conducting business and to contribute to the increase in the level of economic development (Drucker 1992). Workings for oneself, as well as, running a business, are not fully utilized as a tool for boosting economic growth and creating new jobs. Individual activity and entrepreneurship, i.e. business activity by individuals, may allow one to check the suitability of new services and contribute to economic development (Kozek 2004: 133-165). The classical theory of entrepreneurship was developed and perpetuated in the literature by Joseph Schumpeter, who saw the entrepreneur as a person characterized by the creative activity of new concepts (Schumpeter 1962). In the presented entrepreneurial characteristics of a person made by the J. Schumpeter, there is a clear exposure of the entrepreneur to focus on the changes that are treated as a natural attribute of his actions. Entrepreneurship is connected directly with the entrepreneur who in a creative and innovative way solves new problems and skillfully uses emerging opportunities and occasions and flexibly adapts to the new conditions (Piecuch 2010: 39).

Money is associated with human economic activity, it also has social significance. Economists consider money as a medium of economic exchange in which there are denominated prices and values for all commodities. In addition, certain attitudes and emotions are connected with money. Such differences in attitudes towards money affect many human behaviors, such as effort undertaken in order to get money, efficiency of work, willingness to give to charity, willingness to save, borrow, conscientious payment of taxes, breach of ethical standards in relation to the collection of money (Zaleśkiewicz & Tyszką 2004: 180). A number of studies have been conducted on the attitudes towards money. According to some of these, attitudes to money comprise of three main elements: 1. emotional element: money is interpreted by people as something that is good or bad, 2. cognitive element: people perceive the relationship of money with their success, enjoy the respect and freedom, 3. The behavioral element; people turn to the need to plan expenditures (Tang & Gilbert 1995). The latter attitude is especially important, because it is associated with thriftiness. Thriftiness is treated as a complex behavior, and not as a single act. It can be explained by economic variables, because this phenomenon includes both the perception of future needs, as well as insurance for the future (Warneryd 2004). Caution in spending money and thriftiness are characterized by those who carefully plan their financial future and control their financial situation.

Attitudes toward poverty and wealth are closely related to attitudes towards money. Poverty and wealth have always intrigued people: Wealth as a matter of dreams and desires, poverty as a state of affairs which one would like to avoid. Wealth is a visible sign of success, while poverty - a sign of failure and defeat. The existence of inequalities between individuals and

groups is both an economic, and a social problem. This is related to the issue of justice, which is a consideration for ethics. Economists believe that the demand for equality can certainly not be fulfilled for the existence of economic growth (Landes 2005). The natural feature of a market economy is the formation of income differences. The problem is only whether these differences are socially acceptable and what is the attitude toward poverty and wealth. So the question arises about bearing the costs of the rich for the benefit of the poor and to what extent poverty is culpable, and to what extent it is a result of systemic solutions.

Attitudes towards the rich and the poor are full of contradictions. On the one hand, enterprising people who can make money are admired; on the other hand, they are envied. With the ambivalence in relation to wealth understood primarily through the prism of the material values the overwhelming part of the respondents does not perceive it as a purpose worth pursuing. In rich societies, it is painful to admit that increasing prosperity is surrounded by spreading poverty. There are two basic positions on reasons why people are poor. One of them refers to the rights and obligations of individuals and states that the people themselves are responsible for their fate, and if you are poor, then it is at your own request. The second states that the causes of poverty are external entities that should be sought in macro-system solutions (Wilson 1991, Rawls & Zwarthoed 2012).

Consumption is defined as the process of meeting primary and higher order needs and appeared along with the development of market exchange. The concept of consumption comes from the Latin 'consumptio'. It means "consumption, destruction". This Latin meaning shows consumption irreversibly wearing something that will not come back. "(Dubisz 2003: 219). The analysis of consumption primarily concerns economists. For them it is a step in the process of economy and relies on the absorption or wear of goods and services to meet the needs. Also for sociologists, consumption is conceived as an important social process. Consumption is a process consisting of actions and human behavior aimed at directly and indirectly meeting needs. So we can talk about consumption as consumer behavior of individuals and groups, involving the awareness and assessment of their needs, recognition of the weight and the decisions of their satisfaction, handling of the acquired funds and their consumption. In this case, consumption is also called consumer behavior in the market, not only in the household (Szczepanski 1981: 133). For this process one should look at taking into account the consumer's social status, the determinants of psychological and sociological positions, lifestyle and social standing.

Consumption is also affected by the value system acquired during the primary and secondary socialization. The high position in the hierarchy of material values indicates the dominance of consumption in the lifestyle typical of Western culture. The consumer in a consumer society does not feel boredom (Bauman 2006). There is a new consumer morality; it is based on the values of hedonistic and individualistic values. Consumers are largely focused on the experience of pleasure and seeking pleasure in life. The motto of the consumer is that when an individual buys expensive things, they feel unspeakable happiness, expensive consuming is good consuming (Bylok 2013). Consumers in developed societies commonly use credit cards when shopping, so they can make purchases without thinking about debt. This attitude is manifested, among others, in the fact that they like to satisfy your cravings, and shopping pleases them (Swadźba 2011: 178).

4. Conclusion

Presented definition of economic awareness and components analysis might be useful for conducting empirical research. Particularly, young generation is an interesting object of research. This definition consists of components which are indicative of economic attitudes of

the young generation. It should be taken into account, that it is a category which does not have too much work experience, but it usually has huge aspirations and aims to achieve success. Usually this young generation is characterized by increased consumption. To be more detailed about concept of economic awareness its subject of analysis would be problems like:

1. Economic knowledge acquired during the process of socialization, related to everyday life and connected with basics economic concepts.
2. The work placed in value system, its features and attributes. Experiencing work during the academic year and during holidays. The way of treating earned money.
3. Activity and enterprise in value system, young people life's plans, including taking into account self-employment and setting up own business.
4. Acceptance of property differences and property and social inequalities. Attitude towards money and savings.
5. Place of consumption in young people life's, criteria for choosing goods and services, pleasure of doing shopping.

Operationalized components of economic awareness mentioned above can be studied separately and they already provide us knowledge about values and attitudes towards economic life and economic activity. But only research, and then holistic analysis can show us coherent attitudes and isolate the types of economic awareness that are specific to young generation.

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Monitoring costs of material flows - a new trend in environmental management and accounting

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Abstract

A new trend in environmental management and accounting is the management and accounting of material flows costs. The optimization of material flows is a base of the optimization of material costs and associated costs. Also has an impact on reducing the negative impact of business activities on the environment. The issue of the management of material flows costs is regulated since 2011 by the standard ISO 14051 – Environmental Management – Material Flow Cost Accounting – General Framework. The authors point to the importance of managing material flow costs, on the main tasks of the cost accounting of material flows in accordance with the standard ISO 14051 and they suggest the possibility of tracking information for management of material flows costs in the valid accounting system for entrepreneurs in the Slovak Republic.

Keywords: accounting analytical records, environmental accounting, environmental management, material flows costs, the standard ISO 14051

JEL classification: P47, Q56

1. Introduction

Growing interest in sustainable development is accompanied with greater focus on environmental performance (Burritt – Schaltegger, 2014).

Effective management of environmental and economic matters has become a major issue to ensure sustainable development. The businesses are under pressure to increase productivity while reducing environmental impact (Kokubu – Campos – Furukawa – Tachikawa, 2009).

Environmental management is constantly looking for ways to improve environmentally performance. Development has led to the understanding of “environment” as something quite separate from production to an integrated approach for material flow management (Jasch, Stasiškienė, 2005).

Material flow management has become a new trend in increasing the enterprise's environmental performance. The issue is regulated since 2011 by the standard ISO 14051 – Environmental Management – Material Flow Cost Accounting – General Framework.

The Material Flow Cost Accounting (MFCA) represents an accounting method that provides the management and other stakeholders with absolutely new data, which can be used in support of the decision-making (Hyršlová, Vágner, Palásek, 2011).

If the enterprise management will not apply the new managerial and accounting practices based on the rapidly changing enterprise environment and the analysis of eco-efficiency strategies and evaluating the impact of economic policy on the environment, accounting system will cause not meet the needs of internal and external users of financial statements (Bahmareva, 2015).

Example of a flexible application of the new managerial and accounting procedures in response to the increasing demands of environmental performance and effectively protect the environment is Japan. K. Kokubu, Kitada H. (2015) write that the Japanese Ministry of Economy, Trade and Industry (METI) strongly supports the promotion MFCA, and leads to increase the number of enterprises introducing this tool.

The results of case study Chompuinwai, Jaimjit and Premsurianunt (2015) are proof of, what positives can bring MFCA implementation in enterprises, that previously have not given attention to management material flows and have not created a database with detailed environmental data. The authors performed a case study in northern Thailand, in the company, which manufactures wood products. Analysis of production process revealed that almost 70% of the wood raw materials used is wasted in the form of chippings, sawdust, off-cuts and defects. By combination of implementation of the MFCA and the design of experiments techniques (DOE) they have recorded a reduction of wood materials losses in the cutting process, as a proportion of total wood materials used, from approximately 69 % to 54 %. Quality of the products has increased, the negative impact on environment was reduced, costs were also reduced and the competitiveness of the enterprise was gradually increasing.

The director of the Vienna Institute for Environmental Management and Economics, (IÖW) Christine Maria Jasch states on basis of experience from several EMA (environmental management) and MFCA case studies that the current accounting information systems do not offer the opportunities needed for easier integration of the data requirements measured according to the standard ISO 14051 into the financial and cost accounting, stock management and production planning“ (Jasch, 2015). There is a need of their thorough innovation.

The previous text demonstrates the importance of management and accounting of material flows costs. The importance of management and accounting of material flows costs has inspired the authors to write this article, which **aim is**:

- point out the main tasks of management and accounting of material flow costs in accordance with ISO 14051,
- to propose the possibility of creating an appropriate analytical records for the material flows costs in the accounting system applicable to enterprises in the Slovak Republic. Attention is focused on the creation of analytical records for main-accounts of costs, which, in the view of the authors, are the most important for MFCA implementation.

2. Data and methods

The source data for writing the article was acquired:

- through the study of Slovak and foreign professional and scientific literature sources, including standard ISO 14051,
- through the conducted research by the authors of the article within the project VEGA 1/0489/15 “Increasing the efficiency of decision making by managers, with the support of information systems and accounting“.

The research was conducted during 2016 in 20 selected enterprises of the Slovak Republic. 12 enterprises were from agriculture, 8 enterprises had other production focus - electrotechnical, chemical, engineering, construction. Data were obtained using a questionnaire containing eight questions. The questions were focused on monitoring of environmental costs and revenues in the framework of accounting analytic records, the compilation of special reports with data of environmental costs and revenues, the presentation of environmental data in annual reports and financial statements, the environmental management system, use of environmental data in

management, the benefits from implementation environmental management system and from the application of ISO 14051 in the enterprise accounting system.

No methodology is in place in Slovak Republic to conduct environmental accounting and to apply ISO 14051. As a result, managers mostly did not have a concrete idea of what are environmental accounting and ISO 14051. Therefore the authors of the article helped the accountants and economists to complete the questionnaire either by their personal participation or by telephone.

Basic characteristic of the surveyed enterprises is shown in table 1.

Table 1: Basic characteristic of the surveyed enterprises

The legal form	The number of enterprises	Agriculture	Industry	The audit obligation	The number of employees		
					11 – 50	51 – 250	over 250
Cooperative	8 (40 %)	8 (40%)	-	all	3	5	-
Stock company	5 (25 %)	2 (10 %)	3 (15 %)	all	1	1	3
Limited liability company	7 (35 %)	2 (10 %)	5 (25 %)	all	2	5	-
Total	20 (100 %)	12 (60 %)	8 (40 %)	all (100 %)	6 (30 %)	11 (55 %)	3 (15 %)

Source: own data and processing

The **source data were processed by the methods** of selection, comparison, controlled conversation with managers of selected enterprises and method of tabular presentation.

3. Results and discussion

3.1 Importance and main tasks of management and accounting of material flows costs in accordance with the standard ISO 14051

Management of material flow costs is part of environmental management. One of the sources of its information support is environmental accounting. It should be organized to meet the requirements of ISO 14051 - Environmental management – Material flow cost accounting – General framework. The standard establishes framework principles for the management and accounting of material flow costs. However, it does not specify how to organize accounting. According to the standard, it is necessary to monitor:

- quantitative information – physical quantity (volume) of material flows and stock of material,
- costs associated with material flows, expressed in monetary units.

Within the material flows should be integrated information on the physical volume of energy consumed and its monetary expression - on energy costs.

In management and accounting of material flows costs are necessary to distinguish:

- material flows related to the creation of added value - the acquisition of materials, the various stages of processing, distribution of products to customers. They are flows towards the products. Products, which are delivered to customers are classified as positive products,

- flows of material losses - poor quality and damaged products, non-product outputs - scrap, waste products, etc. These products are not desirable from an economic and environmental viewpoint. Basically, these are streams of solid, liquid and gaseous wastes (flows towards waste). The losses of material are classified as negative products.

In the process of implementing the management and accounting of material flow costs, the main emphasis must be on the transparency of material flows and associated costs. The costs associated with waste flows should be estimated as accurately as possible and should be allocated to the loss of material, not to the products sold. In classical management and accounting systems, they are allocated directly to products. Their separation from product will allow for deep analysis and minimization of waste flows.

The ISO 14051 standard requires defining material flows in an enterprise, determining cost centers in which material is processing (CCm), compiling material balances in individual cost centers and to determine the costs associated with material flows - with their negative and positive products. CCm are marked in the original English version as quantity centers (QC). They represent the selected part or parts of the process in which the material is stored, transformed or used. Inputs and outputs are quantified in both physical and monetary units.

The first step should be to create a material flows model. The model must include those material flows, the costs of which will be monitored in environmental management and accounting.

Material balances are material balances that enter CCm and emerge from CCm in the form of product or of in the form material losses (waste). Because energy and mass can not be generated but only changed, physical inputs and outputs must be equal. This ensures that all materials subject to management and accounting of material flows costs are captured. Then, it is possible to compare material outputs and stock changes to identify missing materials and other gaps in equilibrium.

In the management and accounting of material flows, four basic types of costs are distinguished: material costs, energy costs, system costs and waste management costs. System costs are all costs that occur during material flows, e.g. personal costs, depreciation and amortization. System costs are spent in the enterprise to ensure that the movement of the material is done in a desirable way.

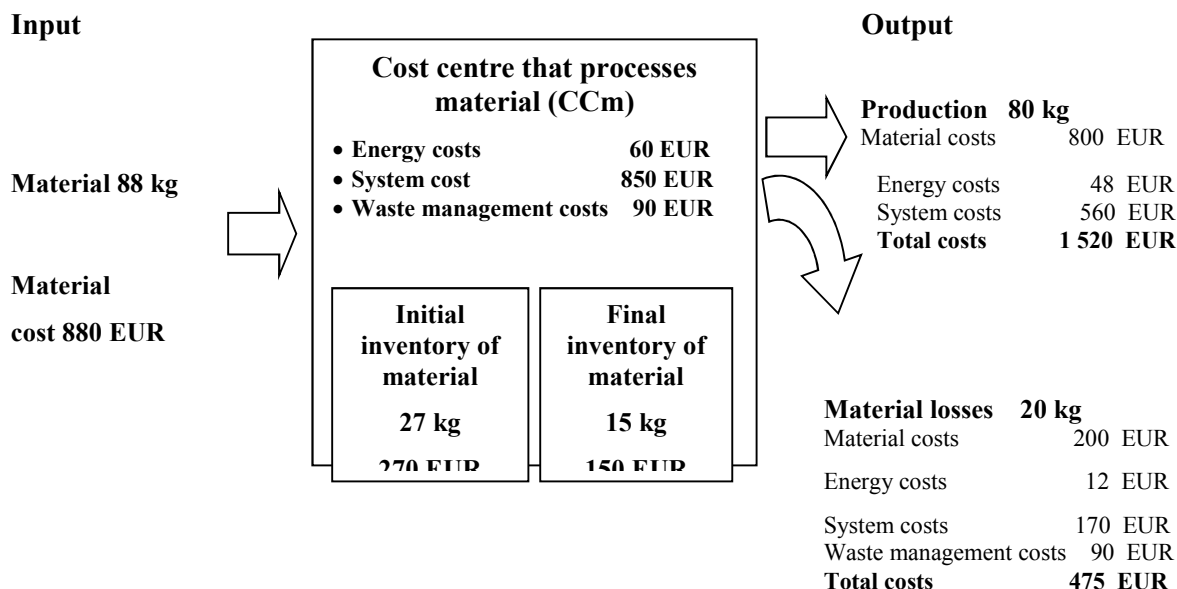
The allocation of energy and system costs to positive and negative products has to be carried out within each CCm, according to the ratio in which the material is represented in positive and negative products. In figure 1, this ratio is 80 % to 20 %. Let the situation be as follows: the price of 1 kg of material is 10 EUR and the costs of processing in CCm are: energy consumption of 60 EUR, system costs 850 EUR, costs of waste control and disposal 90 EUR. Energy costs and system costs will be divided in a ratio 80 % to 20 %. The cost of waste control and disposal will be allocated in the full amount to the cost of a negative product. The distribution of the cost of positive and negative products is shown in figure 1.

Individual CCm in the production process are linked to each other and the values of positive and negative products for the whole process are cumulated. The model thus provides an overview of the whole process and identifies where material losses can occur.

ISO 14051 can be applied to the whole business chain of a particular product - from the first supplier to a supplier to the final consumer. Every customer can negotiate with their suppliers of better material-energetic and environmental properties of the supplied material. Such cooperation initiates material producers to implement economic and environmental innovations and apply new technologies. The producer of material can thus ensure that the material best

suits the conditions of further processing, that material required as few modifications as possible and thus reduce costs and waste production at the customer. The result of this such an approach to the application of ISO 14051 is to improve the production process and higher eco-efficiency of material and energy at the supplier, the customer, within the business chain and in terms of the whole national economy.

Figure 1: Distribution of costs in management and accounting of material flows costs



Source: standard ISO 14051 and own data

3.2 Possibilities of creating information for management of material flows costs in accounting system for entrepreneurs in force in the Slovak Republic

The standard ISO 14051 was published in Slovak language under number STN EN ISO 14051 in 2012 (1.8.2012). Its implementation in enterprises has been still in very beginning. The management of the Slovak enterprises begins to get acquainted with ISO 14051 and, in the case of interest, makes the first analyzes necessary for its implementation. The standard itself does not talk about modifying the accounting system and about specific accounting. This must be done by businesses themselves.

The first step towards the introduction of environmental accounting was made in Slovak accounting legislation 7 years before the issuance of STN EN ISO 14051. The amendment, valid from 01.01.2005, brought the obligation for the enterprises (which have obligation of audit) to declare in their financial statements and annual report the data on the impact of business activities on environment (§20, para.1, point a). However, to date there is no methodological material, which would determine how to fulfill this obligation and no accounting or tax authorities not make control its implementation.

In such a situation, the building of environmental accounting and application of ISO 14051 depend on the maturity and management needs of each enterprise.

From the 20 businesses that were surveyed in April 2016, only two industrial enterprises had very detailed environmental information in their information system. Both are part of large multinational corporations. One is an enterprise of the electrotechnical industry with a parent company in Germany and the other is a chemical enterprise with a parent company in the Czech Republic. Both businesses have a separate environmental department and an established environmental management system.

Environmental information are processed through the SAP software system, one enterprise has also built its own software for the selection of environmental information. Both enterprises consider the monitoring of environmental information to be sufficiently detailed. These information are stored in very large enterprise databases and managers do not see the usefulness of their full projection in the accounting system. Only selected aggregate information are monitored in the accounting.

The other enterprises surveyed have analytical records of environmental data more or less detailed. In the agricultural enterprises, it mainly concern two main-accounts of costs: an account 518 - Other services and account 538 - Other taxes and fees. Three of agricultural enterprises detailed monitored environmental costs in previous years - during the implementation of the projects for which were obtained grants from the EU. Costs were monitored outside the accounting and registered on the special forms of the EU. However detailed monitoring of costs in these forms did not lead to a significant persistent modification of the sub-accounts of costs.

In industrial enterprises (except for the two mentioned), some environmental costs were monitored also on sub-accounts for the main-accounts 501 - Material consumption, 502 - Energy consumption (external costs) and on MD of accounts group 61 - Change in inventory (internal costs). These sub-accounts, however, did not arise from the effort to apply the material flows costs accounting, because managers did not know about ISO 14051. However, in the case of implementation of ISO 14051, these sub-accounts would be useful.

The implementation of material flows costs accounting (MFCA) requires the creation of the analytical records for main-accounts that would allow to separately view and separately value the material flow that:

- goes into the final product delivered to the customer - into a positive product,
- represents the waste and the loss of material - it inputs into the negative product (flow of waste and losses).

At present, the accounting systems of Slovak enterprises show in the waste cost only the costs of waste handling and disposal. They do not show the value of the waste generated. Nowadays, the value of the waste generated is part of the value of the manufactured products or it is part of shortages and damages. Such accounting does not provide enough information to optimize material flows and thereby increase the economic and environmental efficiency of production.

In the following text, we will use the manufacturing process of product A to illustrate our proposals. We will designate the positive product as AP and the negative product as AN. AP product valuation will consist of production costs without losses and waste. AN product valuation will consist of two components:

1. value of material losses and waste,
2. waste disposal costs.

For the MFCA implementation, it is necessary to integrate detailed information about the input material into the enterprise management system. Information recorded in current cards of materials are not sufficient for MFCA. They need to be expanded by the environmental characteristics of the material. We propose to introduce into the management system records of material that, in addition to the information currently recorded on the material cards, will also include the environmental characteristics of the material - its detailed composition and the degree of its environmental impact on the environment (environmental negativity).

We recommend following scale to indicate the degree of environmental negativity:

1. Negligible environmental impact - no / insignificant impact on the environment,
2. Marginal environmental impact - little impact on the environment,
3. "Medium" significant environmental impact - significant environmental impact that needs to be minimized,
4. Significant environmental impact - to be addressed as a matter of priority, the measures must be taken.

Such scale is often used in environmental management systems of enterprises. Using this scale in the MFCA system would ensure the interconnection of the MFCA with the environmental management system. We recommend begin of MFCA implementation through a pilot project for the types of materials that have a level 4 on the scale, i.e. they have a significant impact on the environment and have to be established measures of manipulation with these types of materials.

After the input material information, the management of material flows costs requires information on the costs arising in the course of flows. For the monitoring of this information, it will be necessary to form the appropriate analytical records for the cost accounts 501 – Consumption of material, 502 - Energy consumption, 518 - Other services, 538 - Other taxes and fees, 549 - Shortages and damages and for other cost accounts. The basic information on the required analytical records is given in table 2.

Tab. 2: Creating analytical records of costs for the purpose of MFCA

Main-account	Determining the cost of the positive and negative product	Degree of environmental negativity
501 Consumption of material	<ol style="list-style-type: none"> 1. indication of the product, for which the was expended cost, in our case, product A, 2. indication of material consumption for the production of AP, indication of material consumption for the production of AN, 3. calculating the ratio of the expended material AP:AN. 	degree 1 – 4
502 Energy consumption	<ol style="list-style-type: none"> 1. indication of the product, for which the was expended cost, in our case, product A, 2. allocation to AP and AN is performed on base of the calculated ratio of material consumption for AP and AN. 	degree 1 – 4
518 Other services	For the main-account it is required to create sub-account for waste disposal. Several enterprises do not have it created. The cost in sub-account will be marked as the cost of the negative product - AN	degree 1 – 4
538 Other taxes and fees	For the main-account it is required to create the sub-account of environmental taxes and fees. If it was a fee or penalty relating to a particular product - A, it is necessary to create new analytical record within the sub-account of environmental taxes and fees. The full value of fee or penalty will be allocated to the negative product - AN.	degree 1 – 4
549 Shortages and damages	Shortages and damages of products are a part of the costs of negative products. From analytical records should be evident: <ul style="list-style-type: none"> • which cost is belonging to a particular product – AN, • which shortages and damages are relating to the enterprise as a whole. 	degree 1 – 4
5xx, 61x MD	<ol style="list-style-type: none"> 1. indication of the product, for which the was expended cost, in our case, product A, 	degree 1 – 4

other accounts of external and internal costs	2. allocation to AP and AN is performed on base of the calculated ratio of material consumption for AP and AN.	
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Source: own processing

When enterprise will create the necessary accounting analytical records to manage material flow costs, it will be possible to determine how much cost is related to the product to be sold to the customer (AP product). In the amount of these costs will valued finished products in account 123 - Finish goods and also semi-finished products in account 121 - Work in progress and 122 - Semi-finished products. Consistent analytical records should prevent that the negative environmental cost is included in valuation of production.

We see two ways to create needed accounting analytical records:

- to present environmental characteristics right in the numeric designation of sub-accounts for costs. In the practice, this would require modification of the existing chart of accounts and increase the number of places used for analytical account by 2-3 places (1-2 place for product and 1 place for environmental impact),
- to maintain the existing chart of accounts and develop the environmental code list. The relevant code would be allocated to existing sub-account of costs from environmental code list.

Our research has shown that managers of enterprises do not like extensive analytical records directly in numerical designation of sub-accounts. Therefore, we see the more practical way in the second way. However, it requires more extensive editing of software, so that it can provide the most appropriate information for the MFCA. It is a new opportunity for software companies.

Experts in the world are developing special softwares, that to facilitate of management and accounting of material flows costs. M. Hájek (2016) states that these softwares are not yet available in the Czech language. They can be obtained, for example, in Germany. The same situation is in Slovak Republic.

4. Conclusion

Managers of many enterprises are not yet aware of the importance and usefulness of management and accounting for material flows costs. The reasons are, in our opinion, two things in particular:

- managers do not know the ISO 14051 standard, examples and benefits of its particular applications in management practice,
- data on material losses and the associated costs are difficult to obtain from classical environmental management and accounting systems.

After acquaintance with the issue, managers see the positives of management and accounting of material flows costs. However, the problem in most enterprises is the lack of financial resources to upgrade the information system and its software support.

Since 1.1.2016, a new waste law has entered into force in the Slovak Republic, requiring much more detailed waste information than before. The new law brought the so-called "Expanded producer responsibility", which gives producers the responsibility to take care of their products throughout their life cycle and thus also when they become waste.

In our opinion, it will be necessary to create for main-account 518 - Other services more sub-accounts and analytical records for waste management, which will be monitoring in particular:

- individual types of separated and other waste (e.g. used batteries and accumulators, waste oils, worn tires, multilayer combined materials, electrical equipment, plastics, paper, glass, vehicles, metal packaging waste, etc.)
- individual types of products.

Acknowledgements

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Quality of products and services: Influence on the brand and image of a dairy producing corporation in the Slovak Republic

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Abstract

The main objective of this paper is to review and assess the quality of products and services and its role as a primary factor in building a corporate brand and image on a case study of a selected dairy producer in the Slovak Republic. Results of a customer survey completed in Slovak Republic served as the primary sources of data for this research paper. Based on the results, it was concluded that the consumers perceive the dairy company Milsy JSC to be a producer of high quality products and services. It was also concluded, that 63 % of respondents consider Milsy brand as a guarantee of quality. Moreover, 63 % of respondents perceive the quality of products and services as the most important factor. Based on the results of statistical analysis we found out that respondent's age has influence on website/Facebook awareness. The corporation is constantly putting effort into increasing the quality of its products and services, as well as their expansion. 57 % of respondents think that the dairy company Milsy JSC has a good image on the Slovak market with dairy products.

Keywords: Corporate Brand and Image, Customer Satisfaction, Dairy Producing Corporation, Milsy JSC, Products Quality, Services Quality, Slovak Republic

JEL Classification: M31

1. Introduction

Falkenreck (2010) defines image as a subjective approach, visualization and an impression, that a person develops in connection to a certain object, while image has the potential to substitute for a lack of information about the product, if the brand is known. Corporate image can constitute a strategic advantage, a source of competitive advantage, as well as a source of future investment, especially in cases of small or non-existent differentiating factor among competitive brands (Moingeon & Soenen, 2002). According to Clow & Baack (2008), corporate image is based on emotions which are induced in customers, as well as competitors, by that very corporation and its respective brands. Nagyová et al. (2014) argue, that the level of brand awareness belongs to the important characteristics when reviewing the strength of a brand. Pelsmacker (2003) states, that a strong brand is capable of reinforcing the customer loyalty. Brand serves primarily as an identification equipment and a differentiator between individual sorts of competing goods (Mesárošová, 2001). The author further alleges, that the customer does not make the decision about a particular product on the spot at the time of the purchase, but his selection is influenced long before this moment. The consumer is mainly influenced by the substantial communication effort of all producers that are trying to overpower the customers' decision - making process by a number of marketing activities. They aim to influence the consumer behavior by building strong brands with high level of awareness. Branding became one of the most important aspects of the business strategy (Holt, 2015). The author also states, that branding is essential for creating values on the side of the consumers, not just visualization, and is also a key instrument for developing and maintaining the

competitive advantage. According to Kotler & Keller (2013), the superiority of marketing in the segment of service delivery requires a high level of efficiency in three broader areas - external, internal and interactive marketing. Mateides et al. (2006) alleges that from a long - term perspective, it is the quality that predicts the success of a corporation on the market, namely, the quality of rendered services and products in comparison to the competition within the economic rivalry. Product quality is one of decisive factors which have a certain impact on consumers' purchase (Košíčiarová et al., 2016). The product quality of many new food products is not certain before purchase and consumers are able to assess it only after its consumption (Kubicová & Kádeková, 2012). The quality of service constitutes the ability of the service provider to achieve the required level of execution on a level co-created with the customer and based on his expectation. That means, it is the customer who sets the requirement on the service quality, and he is mainly interested in the environment in which the service is delivered, the ability to deliver the service reliably and exactly, the full customer experience, the competence level of the personnel, and the preparedness of the personnel to promptly solve the individual customer desires (Gúčík, 2006). As per Kita et al. (2010), the quality of the rendered services is an important aspect in the eyes of the consumers, as it holds a firm place within the process of satisfying the customers desires in connection to product, and this on the ability of the corporation to grow in market share. Currently, a strong interest is placed on quality and clients are willing to pay more for it. Kotler & Armstrong (2004) state, that customer satisfaction is closely connected to how clients perceive their expectations were fulfilled with the product or the value that the product delivers. In cases when expectations are not met, the client is dissatisfied, on the contrary, fulfillment or overachievement in the very same aspect make clients often pleasantly surprised.

1.1 Own Attitude to Submitted Problematic

Forming an image of a company is a long - term activity, which can span over the duration of several years and is influenced by a multitude of factors. An important factor in building a strong brand and a good image of a corporate subject is the quality of products and services. Above that, it is also the level of customer satisfaction, continuously rising customer demands on quality of product and services, as well as dynamically changing market conditions and a strong competition, which substantially influence the strength of a strong brand and image. Our main objective in this paper is to review and assess the quality of products and services and its role as a primary factor in building a corporate brand and image on a case study of a selected dairy producer in the Slovak Republic.

2. Data and Methods

The purpose of this paper was to show what an important role is played by the quality of products and services and what is its subsequent influence on the brand and image of a company. Mainly, it was reviewed how consumers perceive quality of products and services and their influence on the image of a particular product. The object of the analysis is the dairy company Milsy JSC, a dairy producer focused on milk processing, production of fresh milk products, cheeses and traditional sorts of dairy based spreads²³.

The paper is divided among two separate parts. In the first, effort will be devoted to the theoretical review of the issue at hand, from regional as well as foreign authors. The second part is based on the author's own research, which was conducted through public survey. Both, primary and secondary sources were thus acquired for the analysis. The primary source is

²³Introduction to MILSY JSC. (2016). Retrieved October 31, 2016, from <http://www.milsy.sk/>.

mainly the data obtained from executing of an anonymous customer survey. The secondary sources are all data and information available in domestic and foreign expert literature.

The survey was executed in the territory of the Slovak Republic and consisted of 164 inquiries on randomly selected respondents. The questionnaire contained 22 structured questions from which 6 were classifying in order to gain basic information about the surveyed. The questions were constructed as closed, as well as opened, through which the respondents gained more flexibility in delivering their answers. The survey was analysed in a contingency Excel table and also graphically displayed.

It was also necessary to leverage statistical methods when analysing the acquired data, through which the correlation between the information could be examined and the hypothesis tested. Chi - Squared goodness of fit test has been used for examining the representativeness of the sample in connection to the age and gender structure. Another statistical method used in reviewing the obtained information was the Chi-Square Test of Independence. This methodology is based on comparison of empirical and theoretical frequencies for every category of observed attributes. For assessing the correlation among these attributes Cramér's V Coefficient has been used. The last statistical method used was Testing for equality of proportions between two samples, which if used in cases where it is possible to approximate the alternative attribute with binomic division to normal division (Rimarčík, 2007). For a more detailed analysis of the acquired data and for achieving the main purpose of this paper, the following assumptions have been set in order to form the null and alternative hypotheses:

Assumption 1: It is assumed, that the company Milsy JSC and its products will be more known by females, rather than males.

Assumption 2: It is assumed that there is a dependency between the frequency of purchases of the Milsy products and the gender of the consumer.

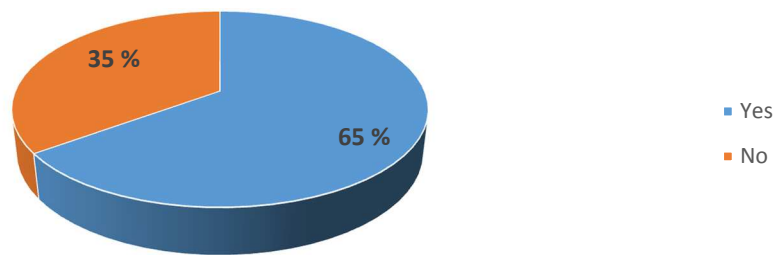
Assumption 3: It is assumed, that correlation exists between the Milsy brand displayed on the products and its perception as a quality guarantee and the gender of the respondents.

Assumption 4: It is assumed that a dependency exists between the awareness of the Milsy web site and Facebook profile and the age group of the respondents.

3. Results and Discussion

The survey was executed in the period between February and March 2015 and 164 respondents from Slovak Republic have taken part. Based on the analysis of the results it is possible to argue, that the predominant responders were women (74 %), living in country (53 %), in the age group up to 24 years old (57 %), high - school with leaving exam educated (48 %), current students (44 %), and a netto salary of up to 500 EUR (51 %).

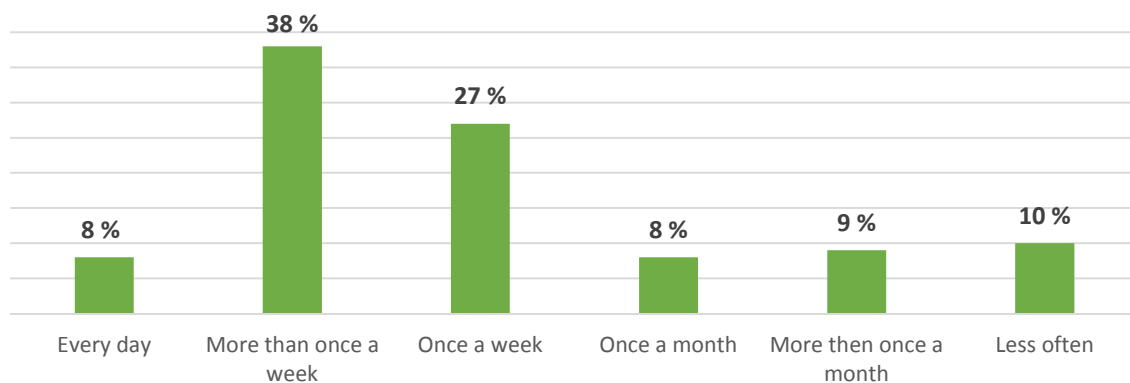
Based on the results we can also estimate that up to 35 % of respondents have no awareness of the Milsy brand and its products. Milsy JSC, together with its long - term tradition, belongs to one of the most prominent dairy producers in Slovak Republic, thus the amount of those surveyed with no awareness of the corporation was quite surprising. This can be result of either an unsatisfactory brand and image building efforts and/or unsatisfactory leveraging of marketing activities. The remaining 65 % of the respondents did know the Milsy brand and its products (Figure 1).

Figure 1: Awareness about the Milsy brand and its products

Source: Own processing, 2015.

The null and alternative hypothesis have both been set at the time of the above analysed survey. By setting the assumptions, it was expected that the prominence of female consumers can be tested. The formulated hypothesis have been examined through Testing for equality of proportions between two samples. The value of the acquired testing criterion U is negative -1.06782 and the value of the table importance level at 5 % is 1.644854. The value of the testing criterion U is within an acceptable range, so the H_0 hypothesis can be adopted. That means that the ratio of female consumers who know the Milsy brand and products is not higher than that of males. Therefore $\Pi_1 = \Pi_2$.

Within the primary research, it has also been reviewed with what frequency do consumers shop for the company's products. Only 8 % of customers shop for Milsy products on a daily basis, 38 % of respondents shop more than once a week, 27 % of respondents on a weekly basis, 8 % of the surveyed only once a month, 9 % of respondents more than once a month a 10 % of those surveyed shop less then possible answers have stated. Based on the analysed data it is possible to conclude that the majority of the consumers shop for the Milsy products regularly on a weekly basis, which is clearly positive for the brand (Figure 2).

Figure 2: Frequency of purchasing of Milsy products

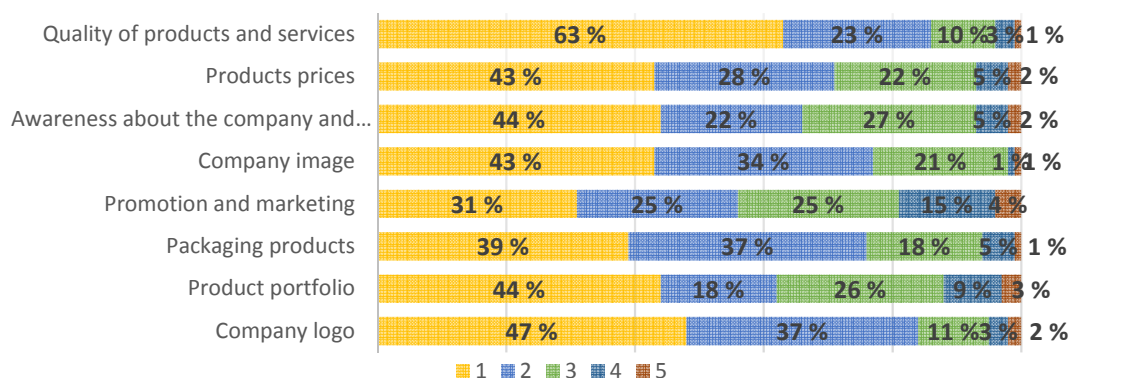
Source: Own processing, 2015.

By stating the assumptions it was also desired to examine if there is a clear correlation between the frequency of Milsy products' purchases and the gender of the consumers. The hypothesis have been analysed through Chi-Square Test of Independence. The next step was to compare the calculated values: $5.326566416 < 11.07049769$. The following results from the test: the calculated value of the Chi-Square Test of Independence is lower than the value in the table. In this particular case it is therefore possible to refute the alternative hypothesis H_1 and adopt the

null hypothesis, which states that there is no dependency between the frequency of purchases and the gender of the consumer.

How consumers perceive the company Milsy JSC was examined through various factors (Figure 3). The task was to evaluate these respective factors by the respondents on the scale of 1 to 5, (1 - best, 5 - worst). From a broad perspective, the quality of products and services was rendered the best, where 63 % of respondents judged this aspect on a level of 1, and only 1% on the level of 5. Similarly, the logo of the company was rated by the respondents in alike fashion - 47 % evaluated it by a 1, and only 2 % by a grade of 5. Furthermore, highly valued was the product portfolio of the company and the brand awareness (44 %). The smallest number of those surveyed, 31 %, awarded the marketing communications a grade of 1, while only 4 % of respondents with a 5.

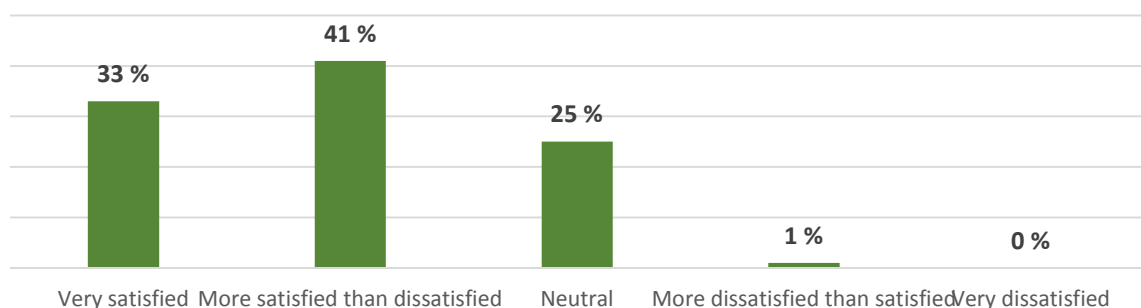
Figure 3: Factors influencing the perception of company Milsy JSC



Source: Own processing, 2015.

When considering customer satisfaction (Figure 4), 33 % of consumers was very satisfied with the products and services of the Milsy brand. 41 % of respondents have stated, that they are more satisfied than unsatisfied. 25 % of respondents reviews the products and services as neutral and only 1 % of them have stated to be more unsatisfied. No respondent has been highly unsatisfied. The quality of products and services is one of the primary goals of the company Milsy JSC, which is clearly displayed by the number of satisfied customers.

Figure 4: Satisfaction with Milsy products and services

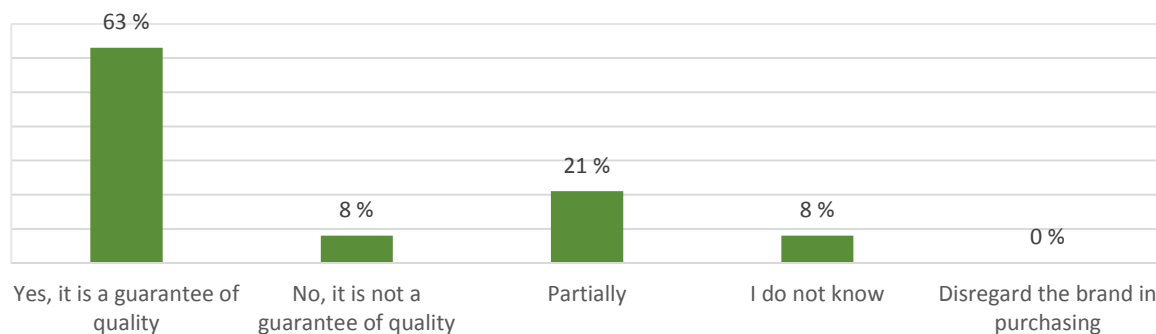


Source: Own processing, 2015.

Within the primary research, it has also been examined if the Milsy brand, clearly displayed on the company products, acts as a guarantee of quality for the consumers (Figure 5). The survey indicated, that the brand does possess such credibility, as 63 % of respondents clearly agrees with the statement. For 21 % of respondents if the brand only partial quality guarantee and 8 %

cannot answer the question. 8 % of those asked states, that Milsy is not a quality guarantee. None of those surveyed argued to be indifferent to the brand while shopping which clearly proves that consumers pay more attention not just to price but also brand when making purchasing decisions. Consumers start to differentiate the products from a qualitative standpoint and do not based their decisions on price exclusively. Continuously growing demands of the customers on the quality of groceries also put a pressure on the producers to improve their production methods. The consumers start to prefer products of home country origin, the amount of purchased domestic products is increasing, as well as those from ecological agriculture.

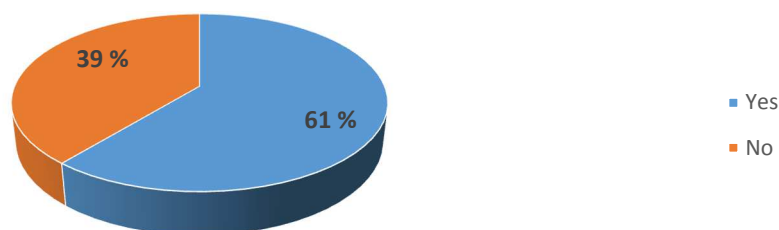
Figure 5: The Milsy brand as a quality guarantee



Source: Own processing, 2015.

In connection to this survey question, an assumption, as well as null and alternative hypothesis have been set. The assumption was to test the dependency between the visibly displayed Milsy brand and its induced quality perception and the gender of the consumers. The set hypotheses have been tested through the Chi-Square Test of Independence. The next step was to compare the calculated values: $2.394879 < 9.487729$, which shows a value of Chi-Square Test of Independence to be smaller than the table value. In this case, the H1 can be aborted and H0 adopted, therefore no correlation between the brand and its quality guaranty and the consumers' gender has been proven.

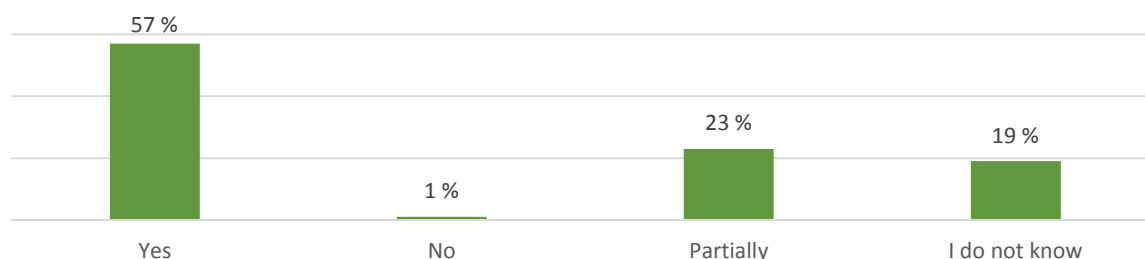
In the following graph (Figure 6), consumers knowledge of the company website and Facebook profile can be observed. Through the social media, the company leverages the easiest and cheapest form of advertising and brand/image building, one that is currently very popular. 61 % of respondents have some awareness about the website, as well as the Facebook profile. 39 % of respondents does not know these possibilities. This gives the corporation a space for leveraging all the current options for a better promotion of Milsy and gaining public-wide attention, one that are not financially demanding but massively used. Through the Facebook profile, the company also possesses a tool to target younger age categories and support the online sale of its products.

Figure 6: Awareness of the company website and Facebook profile of the company Milsy JSC

Source: Own processing, 2015.

Within this aspect, another assumption has been formed to test the dependency between the awareness of the company website and Facebook profile and the consumers' age group. The hypotheses have been tested through Chi-Square Test of Independence and the calculated values then compared: $16.3410464 > 3.841458821$, i.e. the value of Chi-Square Test of Independence is larger than the value stated by the table and it is possible to abort the null hypothesis H_0 and assert that the H_1 is correct. Therefore, there is a correlation between the awareness of the website and the Facebook profile of the company Milsy JSC and the age of the consumers who possess such awareness. As the dependency has been tested, its strength could be evaluated by Cramér's V Coefficient with the resulting value of 0.296734. Therefore, the strength of such dependency can be argued as small.

It was also examined within this paper, if the consumers questioned do consider the Milsy brand to have a positive image on the market (Figure 7). The majority of respondents (57 %) believes such to be true. Only 1 % of respondents believes the opposite, 23 % considers the image to be partially good, and 19 % of those questioned could not answer the question.

Figure 7: Image of company Milsy JSC

Source: Own processing, 2015.

4. Conclusion

Nowadays, the consumer is more educated, has broader overview, and compares the products and services of a company constantly to the competition. There is a continuous growth of the amount of customers that place stronger emphasis on the quality of products and services. Quality is thus one of the most important attributes when building a strong corporate brand and a good image on the market, which was all declared and proven within this research paper.

Through the questionnaire survey, customers' perception of the brand and image of a Slovak dairy producer Milsy has been tested, as well as the quality of its products and services. The level of the brand awareness among the consumers has been evaluated. Through a statistical analysis, it has been concluded the ratio of women who know the brand is not higher

than that of male customers. Thus, all respondents regardless of their gender possessed the same level of awareness about the brand.

When it comes to the frequency of purchases, its dependency on the gender of the respondents has been reviewed. The paper firmly concludes that no correlation between these two aspects exists, so gender has conclusively no influence on the frequency of the Milsy products purchasing, and both men and women share similar purchasing habits.

Primary research part of the paper also reviewed how consumers evaluate the respective aspects of the Milsy brand. It has been concluded that the highest appreciated factor was the quality of the products and services, awarded by the highest grade of 1 by 63 % of respondents among other highly regarded aspects were also the logo of the company, awareness about the brand and its image, as well as the product portfolio.

It was also examined if the Milsy logo, visibly displayed on the products of the company possesses a quality reference for the consumers. The survey proved that for 63 % of respondents, the brand does constitute such quality guarantee. Via statistical examination, it was tested if this quality status, induced by the logo on the product, and the gender of the consumer are dependent. Such correlation has not been proven.

The last statistically tested question was the one of corporate website/ Facebook profile awareness and its influence on the age range of the customers possessing such awareness. It was proven, that age is a determinant factor and the sites are more known by younger age groups, while older consumers behave in a predictable consumer patterns and visit stone corporate branches.

Based on all conclusion of the study it can be stated, that the company Milsy JSC provides high quality products to its customers. The subsequent customer satisfaction is then reflected through the strong image of the brand.

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Theoretical background of the main Hungarian and international life cycle models

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Abstract

Enterprises go through different stages during their life time – from foundation till death. The subsequent nature of these stages gives the life cycle of the given enterprise. During the life cycle, each stage has its own specific characteristics and unique problems. Several Hungarian and foreign researchers dealt with the life cycles of enterprises but examined them from different aspect, characterized and defined each development stage separately and set up their own models.

In the frame of my primary research field – development opportunities and life cycles of the Hungarian small and medium-sized enterprises –, my aim in the first phase is to explore the models of the main international and Hungarian researchers and present them by outlining the characteristics of the given cycles. Additionally, I cover and analyze the similarities and differences of these models.

Keywords: enterprise, lifecycle models, SME

JEL Classification:

1. Introduction

The enterprises go through various development phases in their life. These cascading phases frame the lifecycle of the enterprises. Different phases have different characteristics and problems. There are many theories and models of lifecycle in the literature and all these approach the subject from different standpoints. (Zsupanekné, 2007; Miskolczi, 2012; Kemenczei, 2009; Horváth, 2016) The aim of this paper is to present the most common Hungarian and international lifecycle models and to highlight the similarities and the main differences of these models. Furthermore, the adaptability of lifecycle models is also presented based on the results of the latest research that focus on the problems and possible solutions of adaptability.

The lifecycle of product (or industry) is the base of most enterprise lifecycle models, which shows the increase in sale. (Kotler, 2002) Enterprise lifecycles can be divided into four main stages (introduction, growth, maturity and decline). In the introduction stage the sales show slight increase because this term is the period of persuasion of the potential customer about the practicability of the product. The second stage is the term of growth when the demand shows sharp increase and the success defines the volume of growth. The next stage is the maturity term with light increase and stable customer base. The last stage is called decline when the demand decreases and the customer looks for new products. (Vecsenyi, 2003)

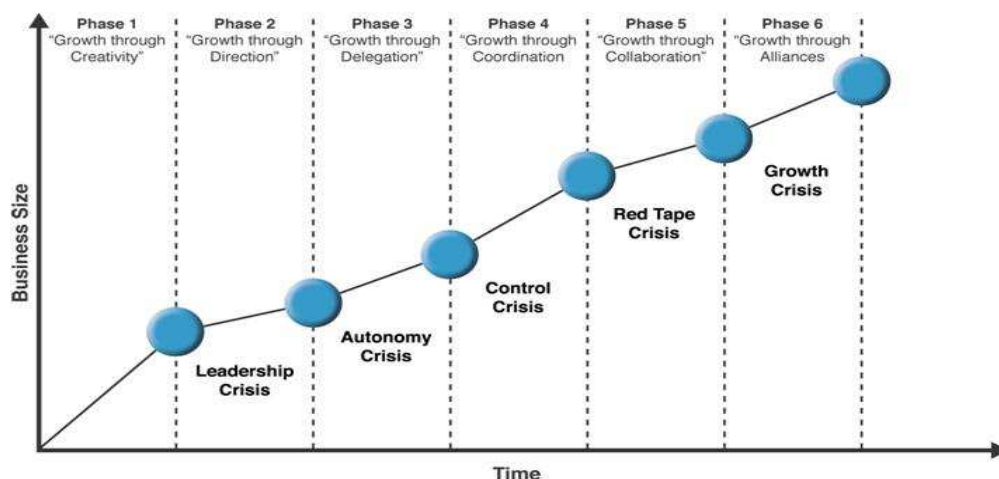
2. International models

First of all, I will show the lifecycle model of Greiner. Greiner's model originally appeared in 1972 (and was republished in 1998 in the Harvard Business Review). He analysed the growth phases of the enterprises' life and modeled life cycles from the perspective of managing growth as depends on the age and size of the organization. He claimed that the growth rate of the given industry should also be considered, since in rapidly developing industries the growth of the

enterprises is also faster. He defined five phases of growth. In all phases there is an evolution and a revolution as well. Based on this, lifecycles start with an evolution which is featured by calm, balanced, continuous increase, and they end with a revolution, which is full with heavy and critical problems. (Salamonné, 2006; Greiner 1972, 1998)

In the original lifecycle model of Greiner the last phase was the collaboration. In 1972, Greiner could not clearly define the crisis term of the collaboration phase. Based on his long-term research, in 1998, Greiner integrated a 6th phase into his model. The enterprises go to alliances phase after having exhausted in the collaboration phase. (Figure 1.)

Figure 1: Lifecycle model of Greiner (1998)



Source: www.exponentialtraining.com

The research of Churchill and Lewis focused on the growth phases of small and medium sized enterprises in 1983. They defined five phases: existence, survival, success, take-off, resource maturity.

In existence stage enterprises have a very simply structure. Everyone does everything, there is no task sharing. (The owner directly supervises). In this phase bankruptcy or selling the business are also possible. In survival stage (the enterprise shows that it is workable. In this stage) short term financial problems and their solutions are in the centre. (The enterprise may grow in size and profitability and move on to success stage.) The success stage means that the business is stable; there are no cash flow problems. This is a dividing line for owners to decide whether to follow the business or start a new one. The fourth stage is take-off when the key problems are the task delegation and planning process. According to the authors, this latter should be addressed on strategic level. The last phase is resource maturity. In this phase the enterprises are in large size. The main task is to support the flexibility and the entrepreneurship. (Churchill and Lewis, 1983)

Timmons (1990) examined the fast growing enterprises and divided the product lifecycles into five advance phases. Every phase has a time dimension too but these have not been scientifically justified in Hungarian cases. In Hungary the Timmons model is used for estimation only. (Vecsenyi, 2003)

The five phases of Timmons model are the following:

- Research and development phase (1-3 years before establishment)
- Birth phase (1-3 years after establishment)
- Early growth (approximately 10 years)

- Success (between 11-15 years)
- Stability (after 15 years)

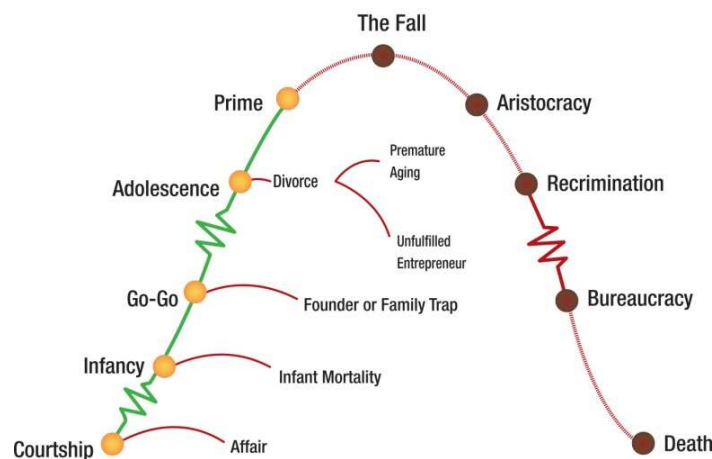
Hisrich and Peters (1991) divided into five further stages the Research and development phase of Timmons. These new developing stages are the following: idea stage, concept stage, product development stage, pilot production, test marketing stage. The test marketing stage is followed by (the commercialization stage which means) the abovementioned product life cycle. (Zsupanekné, 2011)

The most detailed and complex lifecycle model was made by Adizes in 1988. Adizes defined and analysed the break-points of every stages but focused only on internal effects, unlike Greiner. (Salamonné, 2006) Another difference in their work is that Greiner based his model on the age and size of enterprises, while Adizes based his model on flexibility and controllability of business. According to Adizes, enterprises are flexible but hard to control when they are young while in the older age they are less flexible but can be controlled more easily. Vecsenyi (2003) completes these findings with the capability of renewal of enterprises. The potential for renewal is the key factor which defines growth and ageing. According to him, enterprises with much experience can also be either 'dinosaur' or 'tiger'. (Dinosaur means that they have great experiences in business with low entrepreneurship. The tigers have high entrepreneurship with great experiences.) Salamonné (2006) considers that the growing size does not necessarily mean a higher level of development, but some stages require indeed bigger company size. Göblös and Gömöri (2004) said that the model of Adizes helped to understand the internal changes/responses of enterprises and this allows the enterprises to become more conscious and the managers to assess easier their position, their maturity comparing to their competitors, and their problems stem from the age of the company.

Adizes divided the corporate life-cycle into ten stages from 'courtship' to 'death'. Adizes said that the lifecycle of enterprises are similar to the human life, therefore he named his stages based on human life periods. (for example: infancy, prime, aristocracy, etc.) (Figure 2.)

Göblös and Gömöri (2004) note that the aim of the enterprises is to reach the prime stage. In their opinion, this does not necessarily mean moving upward on the growth curve. The prime stage can also be reached by rejuvenating with suitable incentive system or organizational development. According to them, enterprises need to go through gradually on the lifecycle phases. They also highlight that growth and rejuvenation can be accelerated, however they can never be skipped.

Figure 2: Lifecycle model of Adizes (1988)



Source: adizes.com/lifecycle

Efficiency and effectiveness cycle models are linked to Robert Kreitner (1992). The enterprise is efficient when it achieves its goals and it is called effective when it uses the necessary resources for its goals. (Vecsenyi, 2003, p.89) Based on this definition, it can be said that the ideal situation for the enterprise is when it can maintain a good balance between efficiency and effectiveness.

3. Hungarian models

Jávör (1993) examined the lifecycle of enterprises from a completely different aspect that was the sociology. He divided the corporate life into 12 phases. When defining these phases – beside of analyzing the characteristics – Jávör's research focused on the transition between phases, the related critical decisions and organizational problems. Salamonné (2006) said about Jávör's model that it showed an ideal growth path in a very clear logical structure.

The theory of Szirmai (2002) presents not only the differentia of the phases, but the different aspects of analyzing lifecycles. He defines three approaches as for the lifecycle curves.

- bird's-eye view: differentiate the lifecycle of enterprises based on the analogy with human life. However Szirmai claims that this approach does not calculate with individual characteristics. He finds that the lifecycle of enterprises is not a linear bottom-up trajectory, but rather an upward spiral.
- research approach: it is called *mezo* level when the enterprise forms itself – the social links of its members according to its own interests. Under the growing process, the size of the enterprise will continuously increase, but in the same time it will become irrational and selfish.
- incubation period: it is called *micro* level; the company has to be presented and analysed according to its own and individual growing process.

Different leading cycles were defined by Vecsenyi in 2003. He observed that entrepreneurs build up the different management and control functions gradually, while facing several difficulties. The most important difficulty is to recognize the main management challenge, which depends on the number of staff. Based on this, Vecsenyi defined three different phases according to the leadership: general servant, manager of managers and manager of systems.

The managers need to recognize different challenges and they need different abilities in different growth phases for leading efficiency. These abilities are the professional or operational preparedness, preparedness for managing a business, and preparedness for leadership.

Kocziszky (1994) defined five phases of lifecycle of enterprises. According to him, the characters and length of phases of the lifecycle are influenced by exogenous and endogenous factors. The phases of Kocziszky are the following:

- establishment: enterprise emerges on the market
- growth: reaching the predefined market position and entering into new areas
- differentiation: this phase is featured by transformation of organization, capital and market concentration or integration
- maturity: consolidation, when the focus is to sustain the achieved results, this is followed by the decline, that is by
- crisis: when begins the climb down and divestiture

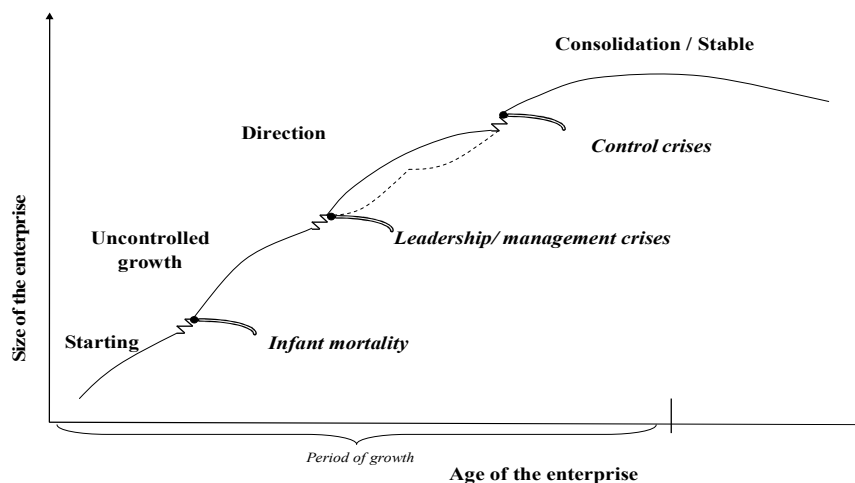
The bases of lifecycle model of Szerb (2000) was the model of Churchill – Lewis (1983) (mentioned above) and the model of Mount- Zinger – Forsyth (1993). Szerb divided the lifecycle into six phases. The first two phases together was named introduction stage, the 3-5 phases together was named growth stage. The phases are the following:

- Start: first year of the business
- Launch: till third year of business
- Initial growth: increasing in demand, revenue and profit
- Expansion: the strengthening competition necessitates the enterprise to think the marketing and the financial strategy over
- Maturity; after which the company will have two opportunities, either
- Innovation or depression

Szerb told that going forward or backward or stability are also possible any time in every stage defined by him.

Salamonné integrated the model of Adizes and the model of Greiner into her own model in 2006 and 2008. The lifecycle model of Salamonné drew up for Hungarian enterprises. According to Salamonné the model of Adizes and the model of Greiner apply similar approaches, have likewise content elements and are therefore complementary and compatible. She made hundreds of in-depth interviews but after some filters only 50 enterprises remained in her sample, which is not representative, but her aim was to define the specific characteristics of Hungarian enterprises based on international lifecycle models and to get to know the special types and causes of growth. She concentrated on the problems and possible solution of internal development, whilst external reasons were not covered by the examination. As result of the research of Salamonné, a new lifecycle model was born, which has different stages than that of the western market-economics. (Figure 3.)

Figure 3: Lifecycle model of Salamonné (2008)



Source: Salamonné et al., 2008

The attributes of forth phase (consolidation) are based on assumption, since the relatively young age of enterprises did not allow to analyse in details and justify the next stage, which will probably be the stability stage. Unfortunately, I do not retain the new results of Salamonné's research; therefore I am not in the position either to confirm or to confute her hypotheses.

4. Assessment, conclusion

In this part I summarize the adaptability and usability of the different international and Hungarian lifecycle models. I present the results of the latest and ongoing research aiming at improving discrepancy problems and adaptability.

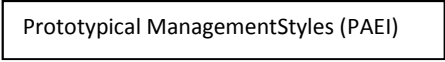
Salamonné (2006) established that it is possible to skip some lifecycle phases. The reason of this in the western market-economics can be the buying-in, while in Hungary the eventual manager experiences which can result in skipping mainly creativity. The other important result of Salamonné is that the phases cannot be clearly separated from each other. It is possible that some characters from former phases appear in later phases.

Bsed on the above results, lifecycle researchers raise the questions of what is a good base for classifying the lifecycles of enterprises or how these lifecycle models help for the managers to lead their business or to set up strategy goals for the future.

Illés and his co-writers (2012) tried to explore the differences between lifecycle models and give an easy-to-use method for managers to define their current position and the features of their possible growth path. To this end, they created, taking into account the model and stages of Adizes, a 'medical chart' to more easily analyse and define lifecycles of the enterprises (and display the position of the enterprise on the growth path). This method is able to define the characteristics of the stages in a structured way. Furthermore by using statistical analysis and setting up categories, it is suitable for subjective and objective classification of phases. (Figure 4.)

Figure 4: Structure of the „corporate medical record”

NAME:	Name of the company	
AGE:	Name of the stage	
Personal data:	Symptoms, complaints:	
The usual attributes of the different stages	Revolution symptoms	
Immune system:	Missing symptoms:	
Dominant evolution characters	Symptoms which appears in Adizes model, but not typical in the examined company's life	
Temperature:	Therapy:	
Symbolical indication to the general status of the company	Suggestion how to solve the problems	



Prototypical ManagementStyles (PAEI)

Source: Illés et al, 2012

Horváth (– Papp) (2013, 2014) tries to eliminate the lack of flexibility of earlier models and to take into account the Hungarian specificities. Horváth established his own 'mill-wheel' lifecycle model which contains 7 phases and – according to the author – is able to solve the following lack of other models (Horváth, 2016):

- ranking of phases
- rejuvenation
- skipped phases

- draw crisis period
- draw persistent phases.

The spokes of the mill-wheel represent six lifecycle phases (Seeding, Creativity, Direction, Delegation, Stabilization, Break out). The model also has a seventh phase in the center of the wheel ('Correction'), which gives free passage between the phases. The correction phase means handling temporary periods between stages.

In the last few years the researchers have tried to solve the problems of modeling and to make an objective definition and presentation of the different phases.

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Cooperation in the Implementation of Innovation

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Abstract

The topic of cooperation in the implementation of innovation become in recent years more and more current. Statistically - the more ideas on innovation, the better is the quality of the best. In the modern world it is not sufficient to implement as much innovation as they may be, because there is too expensive, risky, and as a result can have not positively influence on the functioning of the company. The idea is to implement innovations efficiently. The cooperation of companies generates the formation of added value, which can be used for all partners. Cooperation with external co-operators can benefit at every stage of the innovation process: creation, implementation, commercialization and diffusion of innovation. The results of research conducted in Polish enterprises showed that among the companies that have implemented innovations level of cooperation is significantly higher. Not only the level of cooperation is higher in innovative companies, but also this cooperation is more "advanced". These considerations show that the cooperation gives businesses better opportunities to implement more efficient innovation, which in turn allows for strengthening of market advantage.

Keywords: Innovation Management, Cooperation, Implementation, Open Innovation

JEL Classification: O31, O32, M1, L14, L26

1. Introduction

Cooperation with suppliers, buyers, competitors or business environment institutions in the field of development of innovation activity is a topic of interest for many areas in management science. An important area of discussion is the issue of creating added value for partnerships that are geared towards innovative activity. Due to the challenges of changes and flexibility in out-environment, companies increasingly choose to work with partners to gain access to the unique resources and capabilities needed to innovate.

According to King and Lakhani (2013) statistically, the more ideas for innovation, the better is the quality of the best. In today's world it is not sufficient to implement as much innovation as possible because they may be too expensive, risky, and as a result may not have a positive impact on the functioning of the company. The idea is to make the innovation implemented effectively. As the value of the best idea grows with the variety of ideas received, so it is important to have access to the widest possible basis.

Where to look for these ideas? Joy's law says that most wise people work for someone else. Therefore, ideas for innovation are worth looking beyond your own company by working with other partners. This is particularly important for smaller companies with limited material and human resources and can not handle all the activities needed to successfully implement innovation. In addition, small and medium-sized enterprises (SMEs) are more strongly connected to a network of informal contacts that they can use to implement innovation (Macpherson & Holt, 2007). Entrepreneurs more often cooperate with the proximate network like spouses, family members or friends than with the further network (Weclawska, Zbierowski, Tarnawa & Bratnicki, 2013). The closer network provides emotional support, sensitive market

information and access to financial resources. Previous studies show that network-based SMEs are more innovative (Ceci & Iubatti, 2012).

Due to the complexity of the innovation process, companies increasingly use the knowledge and resources of their external partners. For this purpose, they must establish and maintain appropriate relationships with the outside environment. Previous research on the company's partnership and innovation activity is rather fragmented and context-sensitive.

This article is part of the currently underlined need to clarify how to use cooperation between organizations to stimulate the development and diffusion of innovation. Cooperation is on the one hand determined by the level of absorptive knowledge of the company, and on the other hand becomes a catalyst for increasing influence, and thus using its own resources for innovation. The survey of Polish companies is intended to show what can be cooperation in innovation and where cooperation can prove particularly valuable to an enterprise in the field of innovative activity.

2. Concept of cooperation

There are two terms in the literature related to the relationship between market actors (two or more). This is the word of collaboration and cooperation. They are generally used interchangeably. Many of the authors referred to below use these terms as synonyms. Collaboration refers to the relationship between business partners, where each partner learns from other partner and thus more effectively implements its own goals. Collaborating companies remain autonomous, relationships between them can be broken at any moment, and the breakdown does not affect the achievement of goals by individual actors (Albani & Dietz, 2009).

Otherwise, the concept of cooperation is defined. Cooperation between companies occurs when companies work together to achieve a common goal. In such relationships, none of the companies can compete effectively without the constant support of other partners (Albani & Dietz, 2009). For example, assembling planes in order to meet their production and sales goals can not do it without a network of business partners. At the same time the aims of the companies cooperating with the manufacturer of the aircraft are closely tied to the goals of the assembly plants.

A similar approach to defining cooperation is found in another definition. It indicates that cooperation requires coordinated resolution of the problem by partners, and the success of the project depends on the respective contribution of each. However, the authors of this definition treat collaboration as a specific form of cooperation. Its specificity in their conviction is that partners work together on a single task (Kern & Kersten, 2007). Anderson and Narus (1990) identify cooperation as coordinated thanks the established relationships, the identical or complementary activities of the enterprises they undertake to achieve the results desired by all stakeholders.

In presented definitions characteristic is the simultaneous implementation partners for the joint and individual and voluntary entering into relationships. This simultaneous execution of the various objectives by the cooperating companies means that the essence of the cooperation approach is to see each of the partners as equally important and to take into account the needs of each. Opportunity for broad-based cooperation is innovative activity, where the main assumptions of cooperation remain the same. In the context of the objectives of this article, emphasis has been placed on the essence of cooperation, which takes into account the needs of all involved parties, leading to synergies in the creation of added value.

3. Cooperation in innovation

Many studies underline importance of cooperation in innovation activities. This part of the article focus on the determinants and efficiency of innovation cooperation activities discussed in the literature. Authors on innovation management emphasizes that innovation is increasingly the result of cooperation between companies. External relationships are important and beneficial for business innovation. There are a number of forms of cooperation between companies that lead to the development and diffusion of innovation. The need for business cooperation in this area is due to the current trend in technology-related companies, the specificity of innovation processes, access to markets and market opportunities.

Cooperative firms have, on average, higher overall performance levels than non-cooperative firms (Abramovsky, Kremp, López, Schmidt & Simpson, 2008) and a higher R&D intensity (Sampson, 2007). The effect of innovation activities on overall is dependent on the kind of partner: supplier and competitor cooperation have a considerable impact on labor productivity growth, while cooperation with universities, research universities and competitors positively affects growth in sales per employee of products and services new to the market (Belderbos, Carree, Diederen, Lokskin & Veugelers, 2004). The innovation success are also influenced by the nature of the cooperation partners. Suppliers and users have a more significant effect on R&D performance than universities, research institutes and competitors (Atallah, 2002). Cooperation with customers and public sector institutions is positively related to the success of product innovations, and cooperation with suppliers and universities has a more significant influence on the success of process innovations (Freel & Harrison, 2006).

Among the companies active innovatively observed component-based business, according to which the processes and organizations are created by combining components from different sources, and companies avoid vertical integration, preferring a more flexible relationship between organizations (Veryard, 2000). Companies should maximize the effectiveness of partnership cooperation in the context of innovation. Benefits of such an alliance organization to coordinate the work of partners based on a systematic, mutually aligning, and “non-slave” implementation of the R&D work plans.

4. Why – benefits from cooperation in innovation

By building collaborative networks, the company gains access to information, resources, markets and technology, gaining the benefits of learning, scale and scope, enabling strategic goals such as risk spreading and outsourcing of particular parts of the value chain and organizational functions (Gulati, Nohria & Akbar Zaheer, 2000). Other benefits of exchange cooperation pointed in the literature are: shortening time to market and delivery time, increasing material utilization, acquiring skills and knowledge, increasing market share (Parung & Bititci, 2006). Collaboration networks are created voluntarily and can take many forms. These include strategic alliances or joint ventures.

Strategic alliances, as a form that has become very important in business relationships, are defined as such forms of cooperation between organizations that rely on the association of resources and the ability of partners to achieve their common goals, while maintaining the legal distinctness of cooperating entities (Xie & Johnson, 2004). Strategic alliances are designed to improve the competitive position of partners, often through the strengthening of common R&D, marketing and technology capabilities. Not every manifestation of cooperation between companies is classified as a strategic alliance. In order to earn this name, cooperation must be aimed at achieving lasting competitive advantage.

Cooperation alone does not have to be long-lasting. It may, for example, provide for a joint development of a new product within a certain time frame. Of course, the benefits of the project can be achieved by partners for a long time. Each form of alliance gives all parties the benefit of participating in them. R&D cooperation refers to cooperation for process or product innovation. In the second case, it is not only about technical modifications of the products, but also about making them more attractive by adding services complementary to the offer. Such cooperation is established in the situation where no company could realize innovation, based solely on its own resources, primarily on the resources of knowledge. Relationships of this type are established with partners up or down the supply chain (Walters & Rainbird, 2007).

It should be added that innovation cooperation means the active involvement of partners in R&D projects and other technological innovation projects carried out jointly with other companies (Kern & Kersten, 2007). The term "active" excludes the inclusion of new technology in an innovation cooperation from an outside supplier (outsourcing to reduce costs). The positive effects of cooperation in the development of innovative activity are primarily related to the expansion of the resource portfolio through access to complementary resources and specific network resources, sharing of research and development costs and transfer of knowledge. Moreover, developing relationships with other organizations not only contributes to increasing the amount of knowledge available but also improves the organization's absorption capacity, resulting in a higher level of innovation.

5. Who to cooperate with?

The selection of cooperation partners depends, among other things of the nature of the innovative project, the competences of the parties, and their behavior in each other (Frenz & Ietto-Gilles, 2009). Cooperation can be vertical - within the value chain, or horizontal - at a given value creation stage for example with competitors or scientific institutions (Tether, 2002). The main motives for cooperation in innovation are: enhancing the innovative potential of the entity through access to the resources of partners, overcoming the barriers to competencies involved in independently undertaking the projects, reducing the costs and risks of innovation, the ability to expand in new areas, increased control over the actions of partners (including competitors) by deepening interdependencies or increasing their dependence (Westland, 2008; Child, Faulkner & Tallman, 2005; Breschi & Malerba, 2007).

Product innovations require knowledge of the expected characteristics and functions of the product (Best, 2009) expected by purchasers and materializable. The latter type of knowledge, mainly technical, is provided by suppliers of materials, components of the product, with which the cooperation often aims to improve the quality of supply and reduce costs as a result of process innovation (Hagerdoorn, 1993). The success of cooperation with suppliers depends on their innovativeness, the tendency to undertake joint projects, but also on the tendency to reduce opportunistic behavior.

On the other hand, consumers usually are not able to express their requirements in the form of technical parameters or design solutions, their messages are emotional and subjective, thus increasing the risk of designing a new product. However, active cooperation with consumers in the development and testing of new products contributes to a better understanding of their needs, increases the degree of market acceptance and strengthens customer relationships. This co-creation is now becoming an important feature of marketing activity (Prahalad & Krishnan, 2008).

Institutional buyers, especially manufacturer and professional users, are able to define their needs, assess their solutions, and in many cases identify specific features and performance

parameters and participate in their development and testing processes (Donaldson & O'Toole, 2007). Cooperation with competitors in innovation is becoming more and more common, even in the context of networking - a coalition of competing companies seeking to gain advantage over other networks despite obvious conflicts of interest between competitors, especially in market operations. The decision to engage in such cooperation requires a careful assessment of the potential risks associated inter alia with the asymmetry of costs and benefits of partners, unwanted outflow of knowledge or increased dependence on rivals. The mentioned studies show the positive correlation between cooperation in innovation and innovation efficiency measured by the sales volume of innovative products.

6. Data and Methods

The study was conducted from April 2016 to the end of October 2016 on the sample of 42 companies from the sector of small and medium-sized enterprises operating in the Pomeranian region. The study was conducted using a technique of Paper & Pen Personal Interview (PAPI) - direct interviews with the participation of the interviewer. The research tool was a structured and standardized paper questionnaire. The respondents were business owners (43.7%) and managers at the highest level (56.3%). The sample is not representative of all companies in Poland. The results can not be generalized to this population. The collected ideas, however, can be evaluated in representative tests in the next stages.

7. Results and Discussion

The level of cooperation of companies in Poland in comparison with other countries looks positive, although cooperation in innovation activity is not so good. For example, in the field of production in Poland in 2012, nearly 64% of entrepreneurs cooperated and in the field of purchasing as many as 66% of entrepreneurs. However, about 27% of the companies have cooperated in creating new products or services (Weclawska et al., 2013).

Studies show that 18% of companies did not cooperate, while the remaining 82% cooperated. The vast majority cooperates with other companies in the domestic market (54%). Cooperation with the science and business environment organization is sporadic (7%). In most cases the current cooperation is continuous (64%). In addition, 9% of companies claim that their cooperation is continuous and its intensity increases. For 34% of the cooperation was a one-off. It can be stated that entrepreneurs are very willing to cooperate, which is a very optimistic phenomenon in comparison with the cyclical social diagnosis in Poland. In the Social Diagnosis study conducted, the level of confidence in Poland has remained at the level of about 12% (Czapinski, 2013). As it turns out, entrepreneurs who make up a dozen percent differ from the rest of society. Research conducted by a group of small and medium-sized enterprises shows that among entrepreneurs, confidence in other people is about 40% (Gardawski, 2013).

The study also attempted to measure the importance of trust. Respondents were asked to assess their level of trust in their partners. On a scale of five, the company rated trust in partners at 2,7 which is slightly higher than the middle value.

In the context of the thesis that collaborative business in innovation generates added value that can be used by partners, the study attempts to answer the question of what cooperation in innovation can be and where cooperation can be of particular value to the enterprise as part of innovation activities. By analyzing the results of the study divided into companies that have implemented or not innovated in recent years, it can be argued that the level of cooperation among companies that have implemented innovation is significantly higher (29% difference). Another clear difference is in international cooperation, which is up 34% among companies that have implemented innovation. So not only the level of cooperation is higher in innovative

companies, but also the cooperation is more advanced. The above reflections show that cooperation gives companies a better opportunity to implement more efficient innovations, which in turn allows them to gain market advantage.

The next part of the study identified how companies use cooperation in the context of innovative activity. Research shows that depending on the type of innovation with other entities, between 8% and 32% of companies cooperated, while the vast majority of the surveyed companies developed their own innovative solutions. The surveyed companies were by far the least open to cooperation for marketing and organizational innovations (8% and 12%, respectively). Greater openness to cooperation has been demonstrated in the implementation of product and process innovations.

Partners in the innovation activity of companies were most often suppliers (38%) and companies from the same capital group (22%). It draws the attention of companies to cooperation with competitors (8%), which indicates the emergence of a new direction - cooperation in the form of co-op. Such results may be confirmed by the fact that smaller companies are focusing their business on networking as clusters or employers' associations. Participation of companies in such forms of cooperation combines cooperation with competitors. The universities and the government research institutions were significantly less likely as a partner to implement innovations.

In question about the planned introduction of innovation in the next 3 years, on average every third company wants to do it in cooperation with other entities. Providers and companies from the same capital group are still preferred. It is also worth noting that the plans of the surveyed companies increase the desire to cooperate with foreign companies in comparison with the implementation of previous innovative solutions.

The next part of the study was aimed at identifying constraints and barriers in establishing and implementing cooperation within its innovative activity. More than half (58%) of the surveyed companies among the main barriers pointed to difficulties in finding the right partner and organizational problems in coordinating cooperation. Most of the surveyed companies that declared that they do not currently cooperate with other actors in their innovation activities did not attempt to establish such cooperation at all, mainly due to lack of such a need (91%). This is largely due to a lack of awareness of the benefits that such cooperation can bring as well as the scarcity of social capital in creating and engaging relationships with other actors and the ability to absorb external knowledge.

8. Conclusion

The analysis confirms the important role of cooperation affecting innovation efficiency both directly and as a mediator between the level of knowledge absorption and innovation performance of enterprises. In the study, emerges the importance of the level of knowledge absorption for cooperation in innovation. According to the research, Polish entrepreneurs stand out from the public with a higher level of trust, which translates into a greater willingness to cooperate. Companies that have innovated innovation in the past three years are characterized by a higher level of cooperation compared to inactive innovators. Firms that created or managed new innovations during the last three years are better prepared to absorb the incoming cooperation. We can conclude that the engagement in the innovation activity influences the decision to cooperate and has a clear impact on its level of importance. The importance of innovation cooperation is closely related to the level of trust. Companies do not cooperate because they do not see this need or are limited by their distrust of future partners or negative experiences from the past.

Among the types of partnerships established, cooperation with suppliers and companies from the same group was strongly dominated. Little cooperation was made with research centers. Companies are more willing to engage in product and process innovation, to a lesser degree in marketing and organizational innovation.

Especially smaller companies with limited resources looking for opportunities to develop their innovative activity should be open for cooperation. The main advantage of cooperation is that it creates more than partners to create independently. Low awareness of the benefits of cooperative business demonstrates the need for educational activities and stimulates discussion between institutions supporting entrepreneurship. All the more, there is much evidence that future models of innovation will increasingly be based on outside resources and not within the company itself. The managerial implications and directions of future research should focus on finding the answer: what knowledge and tools the entrepreneur needs to organize and manage effectively cooperation in innovation.

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