The market of milk and dairy products in Russia: peculiarities, tendencies and prospects of development

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Abstract
The dairy industry is of particular importance for the economy and population of Russia. In the dairy industry and related industries employs more than 21 thousand organizations and more than 1.2 million people, milk and dairy products to 15% of the turnover of retail trade networks.
In the 90 years the production of milk and dairy products is characterized by significant decrease of production and by 1999, the decrease amounted to 45.16%. The result of research of market of milk and dairy products: production declined faster than consumption of milk and dairy products.
In 1990, per capita consumption of milk and dairy products was 370 kg per year, in 2014 this figure was only equal to 243 kg. The decrease in consumption of milk and dairy products is a result of lower real incomes.
Constant excess consumption of milk and dairy products on total volume of production over a long period of time led to the growth of imports. The volume of imports in the period between 1990 and 2014 has increased by 11.84%, while in 2014 the volume of imports decreased by 3% compared to 2013.
The sanctions imposed in August 2014, could not ensure rapid growth of production volumes of milk and dairy products in the country.
The main reasons for low production of milk and dairy products in Russia, according to experts are: shortage of raw materials, long investment cycles in dairy cattle, the increase of production costs of milk and dairy products, low level of profitability of the dairy industry; low purchasing power of the population, reducing the number of existing enterprises of the dairy industry.

Keywords: consumption, milk and dairy products, prices, production, the market.

JEL Classification: C-10, C-83, M-31.

1. Introduction
According to the World association of health care milk and dairy products are one of the most important products in the menu of a majority of mankind. Milk and dairy products are included into the Doctrine of national food security of the Russian Federation and have paramount value in the population diet.
Today Russia is one of the world's largest producers of milk and dairy products, however has rather low share of commodity milk in total production of 57%, and on efficiency of a livestock loses to the developed countries more than twice. Production of branch makes to 15% of a turn of retail networks.
With adoption of the Doctrine of national food security the task to provide 90% of internal consumption with own production is set for dairy branch. In 2013 the indicator of security
made only 76%. Thus the indicator of security with commodity milk is lower than another 66%. Refinery capacities of branch are loaded for 60-70%, that is their deficiency isn’t the limiting factor for production.

For achievement of the purpose, first of all, it is necessary to define the main tendencies and regularities in the market of milk and dairy products, to define the main features of development of market condition. On the basis of the received results of research it will be possible to make forecasts and to formulate scenarios of development of production, consumption, to estimate influence of factors in the market of milk and dairy products.

2. Data and Methods

Theoretical and methodological basis of research are scientific works of leading domestic and foreign scholars on the theory of regulation of market of milk and dairy products, scientific research and practical recommendations of participants of the market of milk and dairy products of Russia, results of research institutions and centers.

Information base of research are legal documents of the Russian Federation, reports the Federal State Statistics Service of the Russian Federation, the Ministry of agriculture of the Russian Federation, analytical and sociological materials listed in the official reports and scientific publications, as well as personal observations of the author.

In the research process, to perform the tasks the following methods were used: analytical, statistical (correlation and regression analysis, methods of comparison of means, cluster and factor analysis), economic-mathematical, monographic, systematic analysis, methods of expert judgments, sociological observation and survey and other.

3. Results and Discussion

The practical significance of research results is to use the received data and the identified patterns with the aim of forming practical recommendations for improving the regulation of market of milk and dairy products in the Russian Federation overall, as well as improving methods and measures to combat illegal imports of products of the decision-making Federal Executive bodies for the improvement directions and methods of improving the efficiency of all the participants (from producers of animal feed to the public); in the preparation of programs of support of producers of milk and dairy products (in the sector of private farms and agricultural organization) and research and higher educational institutions in the educational process.

The dairy industry is of particular importance for the economy and population of Russia. In the dairy industry and associated industries employs more than 21 thousand organizations and more than 1.2 million people, milk and dairy products up to 15% of the turnover of retail trade networks. Currently, the dairy industry is one of the most import-dependent sectors in the food industry of the Russian Federation.

Today Russia is one of the largest producers of milk and dairy products, however, has a relatively low share of commercial milk in total production (57%) and in productivity of dairy livestock loses developed countries more than 2 times.

The production of milk and dairy products is characterized by a severe decline after the beginning of economic reforms in Russia in the 90 years and is characterized by sharp reduction of volumes of production, supply and consumption until 1999.
Figure 1: Volume of production and consumption of milk and dairy products in Russia in the period from 1990 to 2014, thousand tons


Milk production and dairy products during the crisis years declined by 45.16% and amounted in 1999 32274 THD the production declined faster than consumption of milk and dairy products. Such dynamics of production may depend on the profitability decline of production in conditions of economic crisis and inflation of production costs.

Table 1: Production of main dairy products, thsd tons

<table>
<thead>
<tr>
<th>Product name</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole-milk products (in recalculation on milk)</td>
<td>11155</td>
<td>11144</td>
</tr>
<tr>
<td>Powdered skim milk</td>
<td>59</td>
<td>84</td>
</tr>
<tr>
<td>Powdered whole milk</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Butter</td>
<td>224</td>
<td>251</td>
</tr>
<tr>
<td>Cheeses</td>
<td>343</td>
<td>378</td>
</tr>
<tr>
<td>Cheese products</td>
<td>90</td>
<td>116</td>
</tr>
</tbody>
</table>

Source: The national Union of milk producers [access Mode]: http://souzmoloko.ru/analitika/

In 2013 the volume of production of milk and dairy products amounted to 30.66 per million tons (96% by 2012 and 94% to the target). The production of raw milk in agricultural organizations, peasant farms and farms of the population in the period from 2009 to 2014, there is a decrease in production volume by 1% annually, decrease the number of cows in Russia is occurring at the same rate (on average -1% per year). In the analysis of raw milk production from January to September 2015, compared with the same period in 2014, a decrease of 0.3%. In 2015 more than 800 thousand tonnes of milk produced the following Russian Federation subjects: the Republic of Bashkortostan and Tatarstan, Rostov region and Krasnodar territory.

The main reasons for low production of milk and dairy products in Russia, according to experts are: shortage of raw materials, long investment cycles in dairy cattle, the increase of production costs of milk and dairy products; low level of profitability of the dairy industry; low purchasing power; reducing the number of existing enterprises of the dairy industry. Introduced in August 2014. the sanctions that were supposed to ensure food security of the country, could not ensure rapid growth of production volumes of milk and dairy products. As a result, to meet the consumption of the Russians again required the import of milk and dairy products.
Market of milk and dairy products in Russia up to 1990 was characterized by one of the world's highest levels of consumption per capita per year. In 1990, per capita consumption of dairy products was 387 kg per person per year, in 2014 this figure was equal to 244 kg per person per year of milk and dairy products per person per year (at the recommended rate of consumption 320-340 kg per person per year). Consumption of milk and dairy products in General during the study period decreased by 37%.

The lowest consumption of milk and dairy products per person per year (less than 200 kg) are recorded in the following Federal districts (FD) and the subjects of the Russian Federation: the Urals Federal district, northwestern Federal district, Chukotka Autonomous district, Sakhalin and the Amur region, the Kamchatka territory, the Chelyabinsk, Tambov and Tula regions, as well as in the Republic of Crimea. The total number of people living in these regions of Russia is more than 10 million people.

Consumption of milk and dairy products is mainly due to the reduction in real incomes. In 2014, the level of incomes of Russians decreased by 6%, the level of costs fell by 5.4% compared with 2013.

Consumer research showed that in 2014 the growth of prices for food products led to an increase in the number of families and households, which redistributed the family budget in favor of only the most necessary food, the number of families and households, which had a consumption of some foodstuffs increased by 11%, and the number of families and households that consider their income sufficient decreased in 2014 by 8%.

The highest level of consumption of milk and dairy products accounted for the subjects of the Russian Federation included into the Central Federal district. Marked the market capacity at constant reduction of production of raw material (milk) for regions of the specified County in the short term will become a serious obstacle for development of the market of milk and dairy products.

Throughout the reporting period note a specific feature of the market of milk and dairy products: permanent the excess of consumption over production of milk and dairy products in Russia. It is important to note that the gap between consumption and production in the monitoring period has steadily increased. Noted the steady increase in consumption over total production led to the growth of imports of milk and dairy products.

**Figure 2: Import and export of milk and dairy products in Russia in the period from 1990 to 2014, thousand tons**

![Graph showing import and export of milk and dairy products](http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/economy/#)
Lack of own production have been covered by a permanent increase of volumes of import of milk and dairy products, which in the period from 1990 to 2014 as a whole increased by 11.84%, mainly by reducing its inventory by 10.51%.

Table 2: Import of milk and dairy products in 2013 and 2014, thousand tons

<table>
<thead>
<tr>
<th>Product name</th>
<th>2013</th>
<th>2014</th>
<th>The relation of 2014 by 2013, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter</td>
<td>165,1</td>
<td>158,0</td>
<td>95,7</td>
</tr>
<tr>
<td>including from Belarus</td>
<td>63,9</td>
<td>66,9</td>
<td>104,7</td>
</tr>
<tr>
<td>Cheese and cottage cheese</td>
<td>466,0</td>
<td>348,2</td>
<td>74,7</td>
</tr>
<tr>
<td>including from Belarus</td>
<td>136,7</td>
<td>163,4</td>
<td>119,5</td>
</tr>
<tr>
<td>Powdered milk and concentrated</td>
<td>255,8</td>
<td>199,0</td>
<td>77,8</td>
</tr>
<tr>
<td>including from Belarus</td>
<td>210,1</td>
<td>175,1</td>
<td>83,3</td>
</tr>
<tr>
<td>Whole milk</td>
<td>323,1</td>
<td>347,3</td>
<td>107,5</td>
</tr>
<tr>
<td>including from Belarus</td>
<td>281,9</td>
<td>318,6</td>
<td>113,0</td>
</tr>
</tbody>
</table>

Source: The national Union of milk producers [access Mode]: http://souzmoloko.ru/analitika/

The volume of imports in Russia in 2014 compared with 2013 increased following the main suppliers of dairy products: Finland 6.3%, Poland by 26.5%. After the introduction of the food embargo dramatically increased the volume of products supplied to Russia the Republic of Belarus: dairy products 17.3%, dairy products by 23.4% and of cheese by 22.9%.

It should be noted the decline in export volumes of milk and dairy products (recalculated to milk) from Russia in the period from January to September 2015, compared with the same period in 2014, the observed decrease of 11% in Kazakhstan and former CIS countries.

Consumption of milk and dairy products is mainly due to the reduction in real incomes. In 2014, decreased the level of income of Russians 6%, the level of expenditure has reduced by 5.4% (compared to 2013).

In the situation when supply exceeds consumption, that is, during low market conditions, supply and demand could be balanced only at low market prices. Dynamics of average prices of producers of raw milk in Russia in the period from 2011 to 2015 is presented in figure 3.

Figure 3: Dynamics of average prices of producers of raw milk in Russia, RUB/t

Source: Information Agency "Milknews" [access Mode]: http://milknews.ru/analitika-rinka-moloka/
In Russia fluctuates greatly on the price of milk and dairy products, increased prices in some years was as high as 60% per year. In the period from 1991 to 2005, purchase prices for milk from fixed has become highly volatile. These fluctuations are primarily concerned with the shortage of products, the natural seasonality of production (seasonality of milk production requires a separate and incremental approach to the solution), climatic features.

Current state of the market of milk and dairy products is also due to its haphazard regulation and reform. It is also necessary to develop and realize actions for improvement of activity of producers of milk and dairy products in the conditions of implementation of the social program for control of consumer prices.

Difficult situation on the market without the use of radical and complex measures in the medium term will lead: to a new decline of production of milk, to a substantial increase in the prices of raw milk and dairy products in General, for increasing sales of counterfeit products.

4. Conclusion

In the study, the author reveals the specific features of the market of milk and dairy products in Russia in the period from 1990 to the present time on the basis of the main trends in the dynamics of production and consumption of products. Identified and systematized the main factors that influence the production, import and consumption of milk and dairy products, changes in the structure of consumption of milk and dairy products.

The market of milk and dairy products in Russia requires a more active state intervention in the processes of regulation and support of commercial milk production, reductions in interest rates on loans for agricultural producers, monitoring the quality of materials used, the process of breeding animals, the quality of produced milk.

The analysis of the condition of the market of milk and dairy products shows a direct dependence of the level of production from seasonal and regional factors, the price of milk (significant dependence on the type and quality of products, brand and packaging), a relatively low share of producers in retail price (may be associated with low cooperation of manufacturers).

Identified the price situation on the market of milk and dairy products, which primarily related to the high volatility of prices for finished products. The price situation on the market of milk and dairy products in Russia contributed to the increase of import volumes from Belarus.

The main reasons for high volatility of purchasing prices for raw milk: the low degree of cooperation of the producers of raw milk, the shortage of raw milk in Russia, the dependence of milk production to seasonal factors that limited the shelf life of raw milk, the lack of modern production capacities for the production and storage of milk as stocks, the lack of available logistics between regions.

To achieve in 2020 the highest results in the industry needs to increase funding and public support of new projects of commercial milk producers, to improve the efficiency of production in agricultural organizations, to increase the marketability of agricultural organizations and peasant farmers by 10-15%.

It is necessary to regularly monitor the changes on the market of milk and dairy products for the purpose of operative state regulation, making decisions on the use of the protection or strengthening of the liberal approach, depending on changing business conditions.
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