Global Supply Chains, Standards, and Development

J. Swinnen

LICOS Centre for Institutions and Economic Performance
University of Leuven
www.econ.kuleuven/licos

Nitra Conference, May 2010

Globalization dramatically changed supply chains

- GLOBAL FORCES rapidly change the environment of farmers and agri-food companies worldwide

- Spread of global STANDARDS on food safety and quality through :
  - foreign investment in agri-food sector
  - trade rules

FDI of Global Retail Chains

1990s: Central Europe & Latin America

2000s:

- Russia
- India
- China
- …

- “food retail” is top investment area

Changing structure of world trade

	World Exports		Developing Country Export	
	1980/81	2000/01	1980/81	2000/01
TROPICAL products (Cocoa, tea, coffee, sugar, …)	**22.0**	**12.7**	**39.2**	**18.9**
TEMPARATE products (Meat, milk, grains, …)	**46.3**	**38.3**	**28.8**	**28.1**
SEAFOOD, FRUIT & VEGs	**19.8**	**31.0**	**21.6**	**41.0**
Other PROCESSED (tobacco, beverages, …)	**11.9**	**17.9**	**10.4**	**12.1**
Total	**100.0**	**100.0**	**100.0**	**100.0**

EU Food Safety & Quality Policy

- Until 1990s: food safety mainly a member state responsibility (despite veterinary directives of the EU Commission)

- Food safety crises at the end of the 1990s were crucial
  - BSE Crisis in 1996
  - Dioxine Crisis

HET LAATSTE NIEUWS

Exclusieve enquête

CVP betaalt het gelag

VRIJDAG 4 JUNI 1999

Prijs België : 30 fr

LEUVEN & BRABANT

TOTALE RAVAGE

Tot zondagavond: slachtverbod en transportverbod van alle levende en dode dieren

Rijkswacht bewaakt geslacht pluimvee

1500 producten verboden. Pas vandaag volledige lijst

Eén gemeentelijk containerpark per arrondissement, waar handelaars en particulieren hun producten kwijt kunnen

Civiele Bescherming transporteert inbeslaggenomen goederen naar verbrandingsoven

Gratis infonummer: 0800/23.000 (van 9 uur tot 17 uur)
Internetinfo van Volksgezondheid: www.minsoc.fgov.be

Een land in nood

KOSOVO

Milosevic wil vrede sluiten

Goedemorgen Vlaanderen

12° 18°

Koel

Rode Duivels spelen 0-0 tegen Japan

Georges Leekens:

«Er staat weer een ploeg op het veld»

feeling tuindagen

4, 5 EN 6 JUNI 1999

Infopagina's teletekst

DIOXINEPROBLEMATIEK VOEDINGSMIDDELEN

VRT pagina 800

Regionale televisie pagina 770

Vacature

76 pagina's

Dioxin Crisis:

Het Laatste Nieuws

"Total Chaos"

De Standaard

Retrospectieve Marcel Broodthaers 9 □ Bartoli en Van Petegem eerste winnaars 23-31

Leven op platteland valt stil

VANDAAG IN WETENSCHAP

MORGEN IN E-LAND

„Ze weten dat het niemands fout is"

BOMAANSLAG VERHOOGT SPANNING IN ISRAËL

BEDRIJVEN ALS ONTWIKKELINGS-PARTNERS

Geweld in Macedonië escaleert

Werkloosheid daalt, maar RVA-budget niet

Straks heten we allemaal Janssens en Peeters

<u>FMD Crisis</u>:

De Standaard

"Country Life Comes to Standstill"

The EU Food **Safety** Policy

- White Paper on Food Safety in 1997 started a major legislative programme which led to the Basic Food Law Regulation of 2002

- “From Farm to Fork” approach: supply chain & traceability
- European Food Safety Authority (EFSA)
- Rapid Alert Systems for Food and Feed (RASFF)

EU Food **Quality** Policy

- There is no real EU quality policy – in preparation (Scotta Report)
- Some support under CAP Pillar II

- Quality schemes are mostly member state initiatives
- Considerable public-private partnerships

Private standards more restrictive than public standards

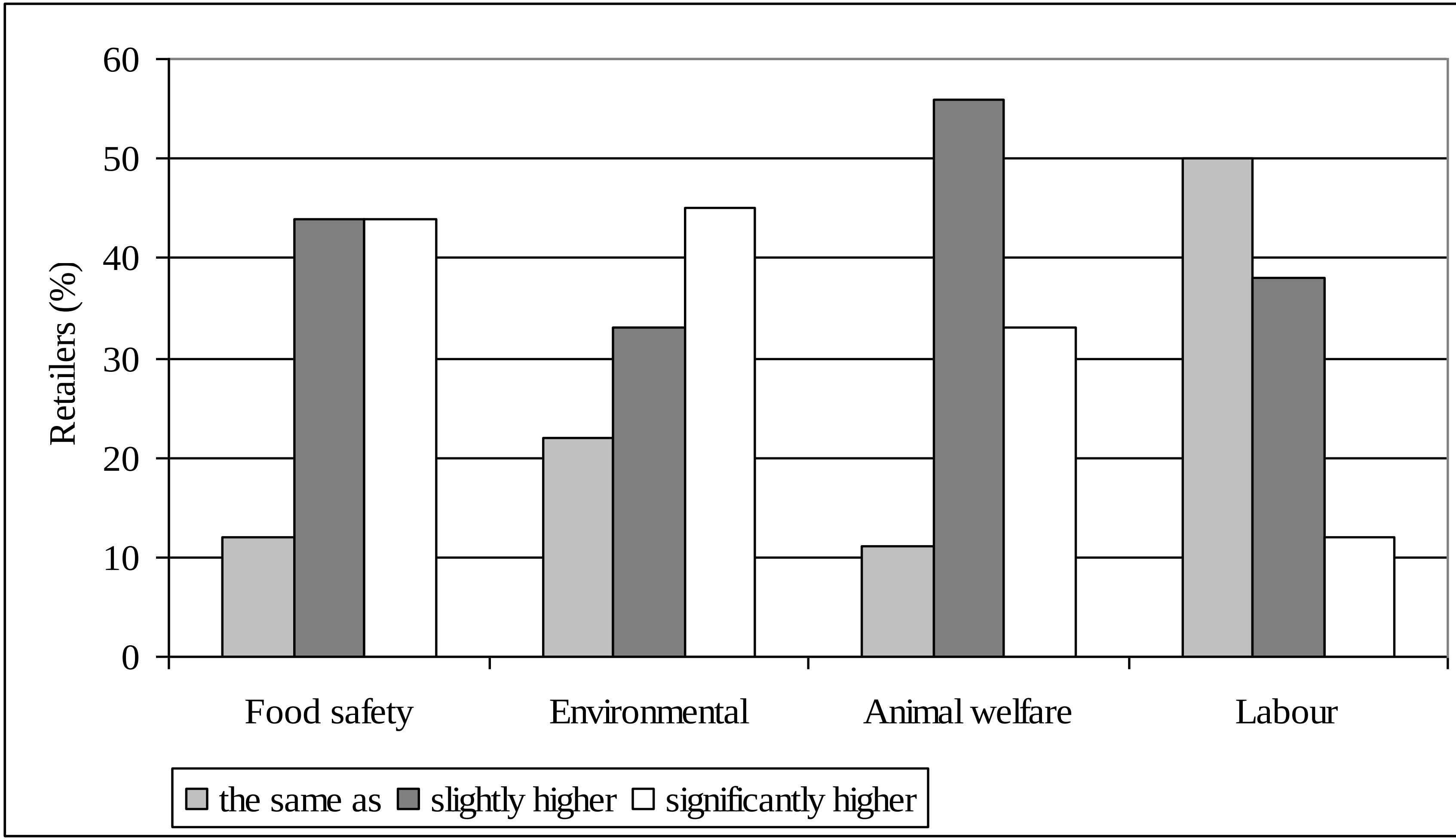


Figure 1. Retailers' self-assessed standards compared to those of government (Source Fulponi 2006)

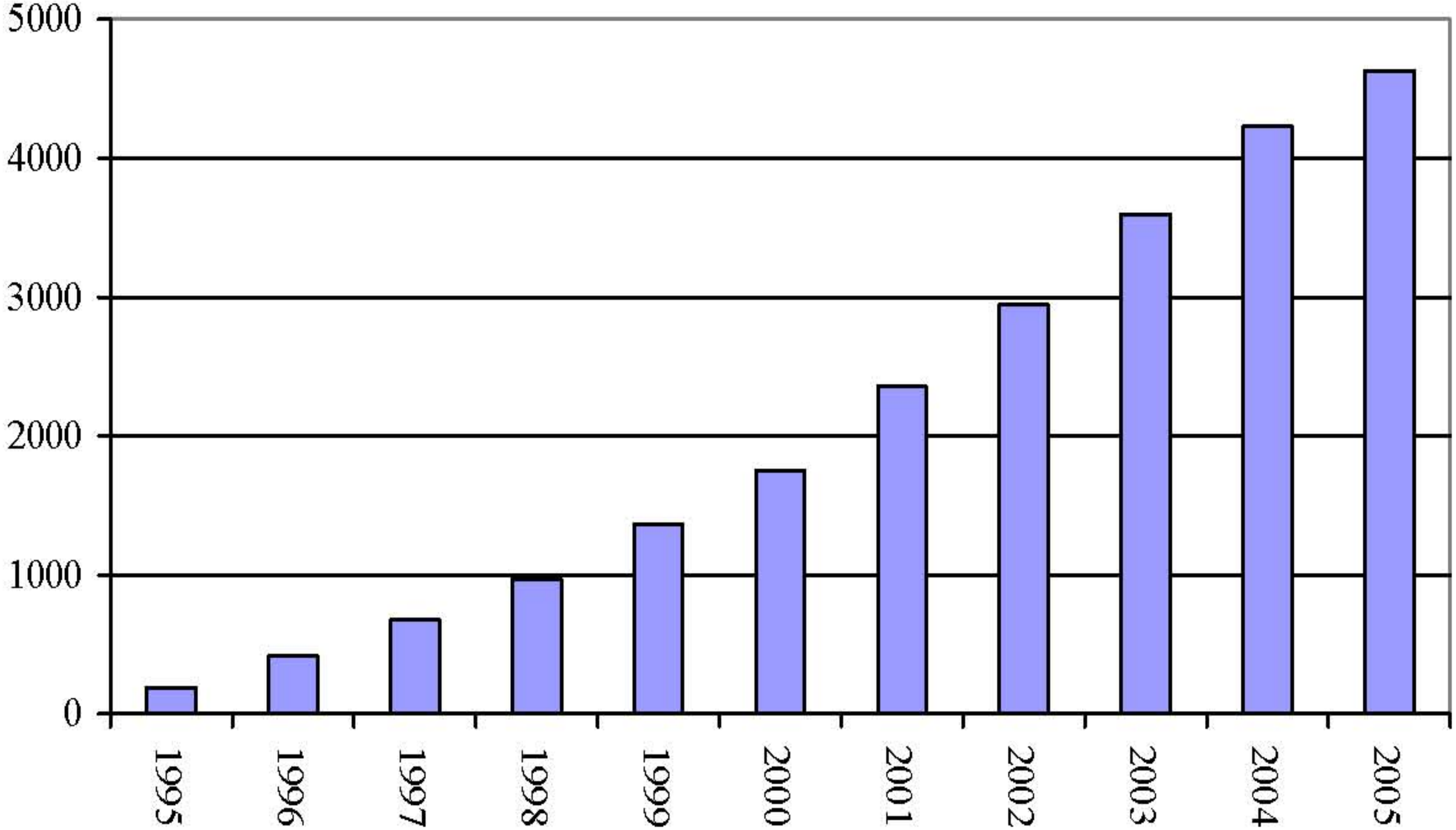
EU Safety & Quality Standards: **Catalysts or barriers to trade ?**

- Traditional argument is that safety and quality regulations are barriers to trade

- However, recent evidence suggests that :
  - the compliance costs may be relatively low (World Bank);
  - Standards may be catalysts for trade by reducing transaction costs
  - once a country satisfies these requirements, the benefits can be very high (Minten et al, 2008; Maertens and Swinnen, 2008)

The next “battlefield” in trade policy

new SPS-rules at the WTO, 1995-2005



Source: Henson, 2006

Private versus Public Standards & Constraints on Trade

- EU **public** regulations require "equivalence of risk-outcome" : based on evaluation of final product (consistent with SPS agreement of WTO)
- **Private**: GlobalGAP requires "equivalence of systems" : based on evaluation of the process as well
  - (Lee 2007- for food of non-animal origin)

=> **Private more demanding**

Impact on Technology and Development

- Quality & safety standards have major impacts on
  - Structure of the supply system (which farms, which products, under which conditions, …)
  - Technology adoption (need for investments to enhance quality and safety)
  - Vertical coordination in the chain
  - Trade conflicts

Impact on Developing Countries

- Debate :
  - “Are rich country standards hurting developing countries?”
- Initial reports on developing countries :
  - mostly negative effects on smallholder participation

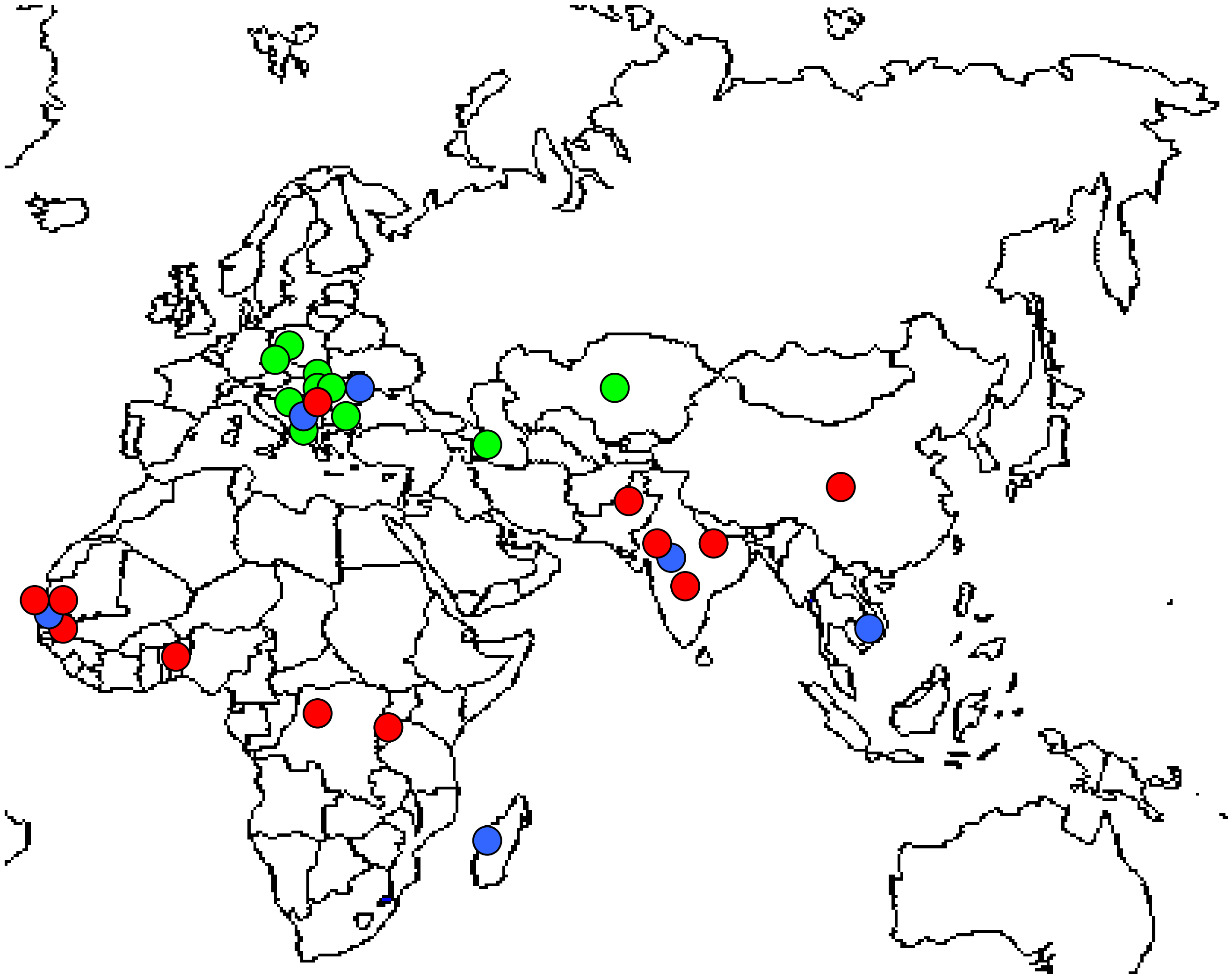
Impact on Developing Countries

But !

- Our studies on transition countries
    - Slovakia (Gow, Streeter & Swinnen, 2001)
    - Poland (Dries & Swinnen, 2004),
    - East Europe and FSU (Swinnen, 2006; White and Gorton, 2005; Noev et al, 2006);

= > Very different conclusions :

Growth of modern supply chains, including extensive vertical coordination creates important opportunities, even for small and poor farms



LICOS surveys on Supply Chains & Development

Different models

- 3 Case-studies of FFV exports to the EU
  - Madagascar vegetable (Minten et al., 2006)
  - Senegal French bean (Maertens & Swinnen, 2006)
  - Senegal cherry tomato exports (Maertens et al., 2008)
  - Evidence from firm-, farm- and household survey data

1. High standard F&V exports from Madagascar

- Rapid growth over past decade
  - 100 farmers in 1990
  - 10,000 small farmers on contract in 2005

Impact on farms

- Rice **productivity** increased by 70%
  - (technology spillovers)
- Length of **lean periods** falls by 2.5 months
  - (with contract: 1.7; without contract: 4.3)
- Contract **income**: about 50% of their total monetary income
- Contract **price** is higher than the market price

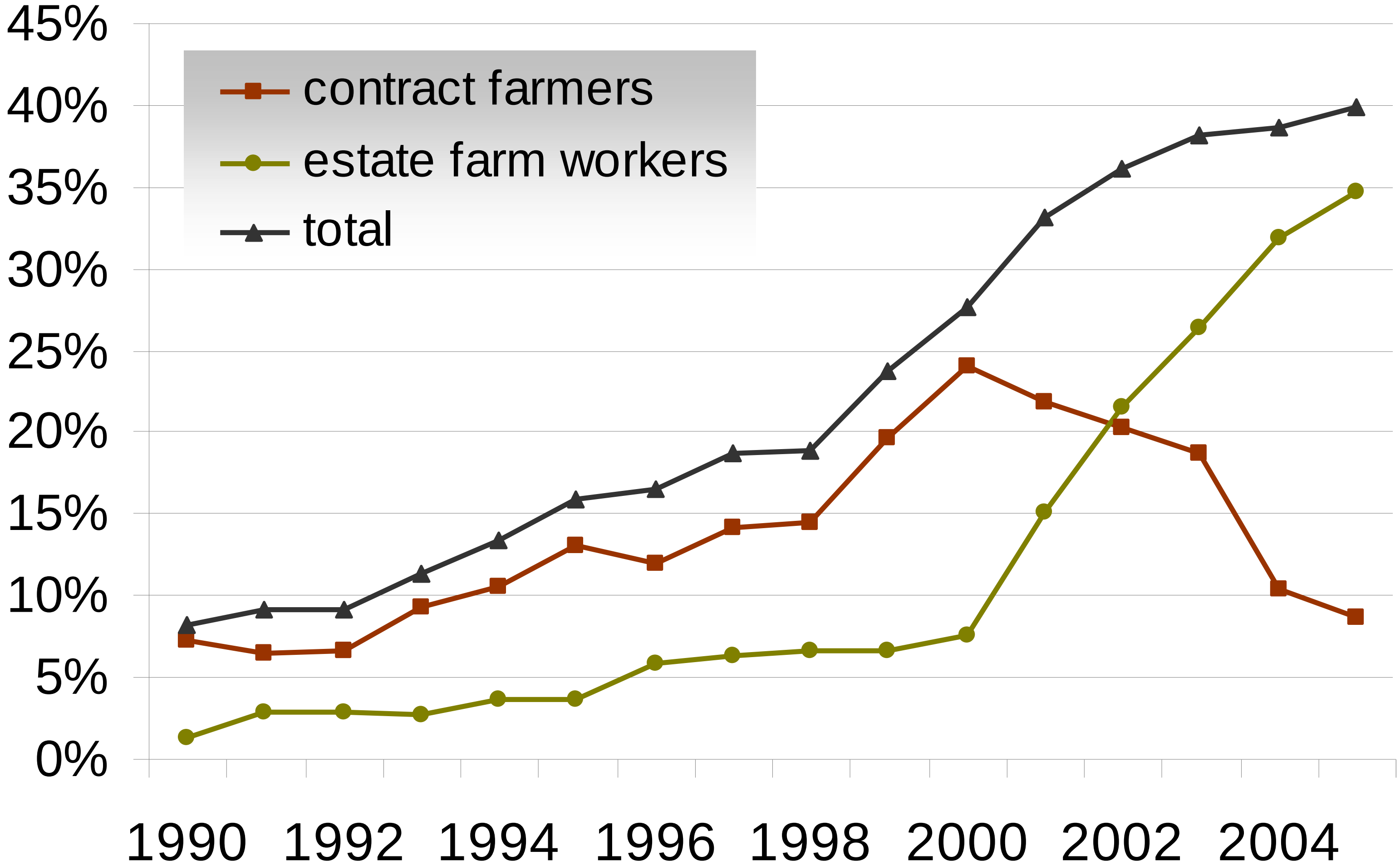
	Importance			
	Not	A bit	Quite	Very
Reasons why households signed a contract (%)				
Stable income during the year	**0%**	**2%**	**32%**	**66%**
A higher income	10%	42%	31%	17%
Price stability	10%	22%	49%	19%
Access to inputs on credit	**0%**	**7%**	**33%**	**60%**
Learning of new technologies	**0%**	**8%**	**37%**	**55%**
No other alternatives for income	8%	61%	19%	12%
Access to a source of income during the lean period	**1%**	**2%**	**25%**	**72%**

2. Bean exports from Senegal

- Mix of small farms and vertically integrated large farms
- + 20 Local export companies control
- Standards affect dynamic development

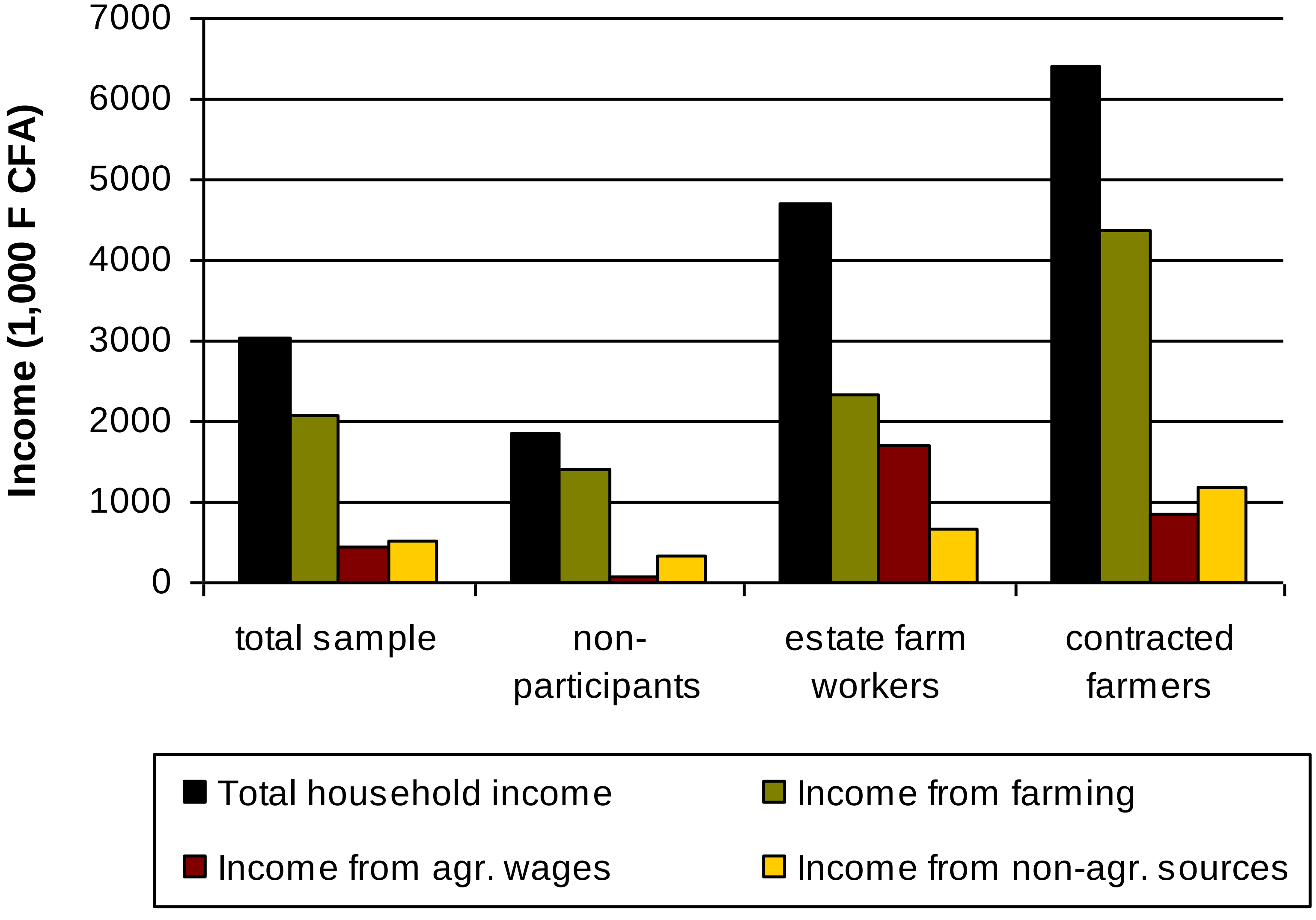

SEPAM.SA
Caroline
Caroline
PRODUIT DU SÉNÉGAL

Share of rural households involved in French bean export production, 1990 - 2005



Source: survey data

Impact on household income

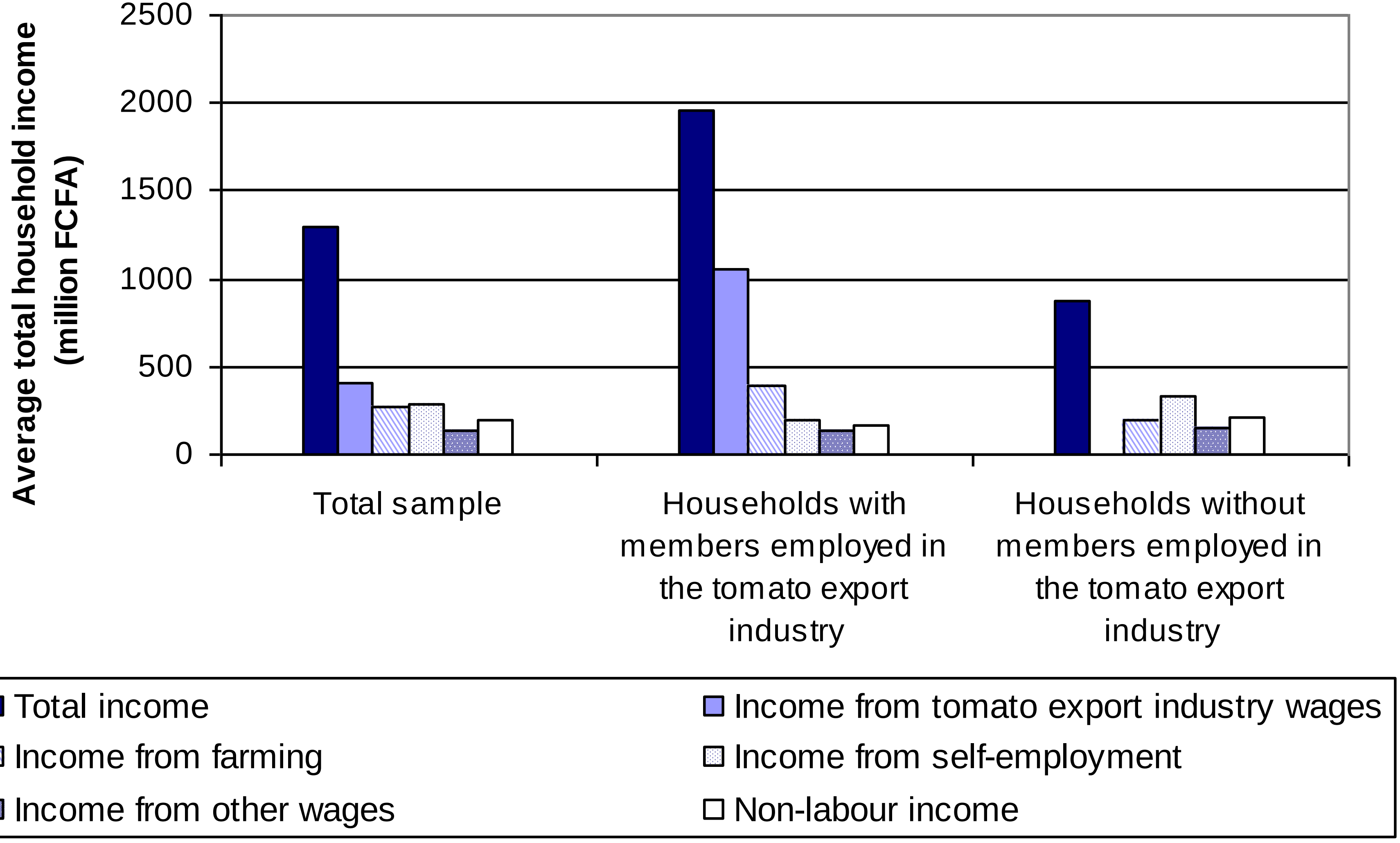


3. Tomato exports from Senegal

- Complete vertically integrated
- Multinational controlled
- Estate farming
- Benefits through labor market (employment)


N°2

Income effects of tomato exports in Senegal



Impact on Developing Countries

- Our recent (survey-based) analyses of F&V trade between Africa and EU (**Madagascar** & **Senegal):**
  - Thousands of small farmers/poor hh produce high standard & high value vegetables for European supermarkets
  - overcoming (and benefit from) high standard requirements
  - the number of farmers involved is growing each year
  - Strong **pro-poor (anti-poverty) effects**
  - **Different models**

Concluding comments