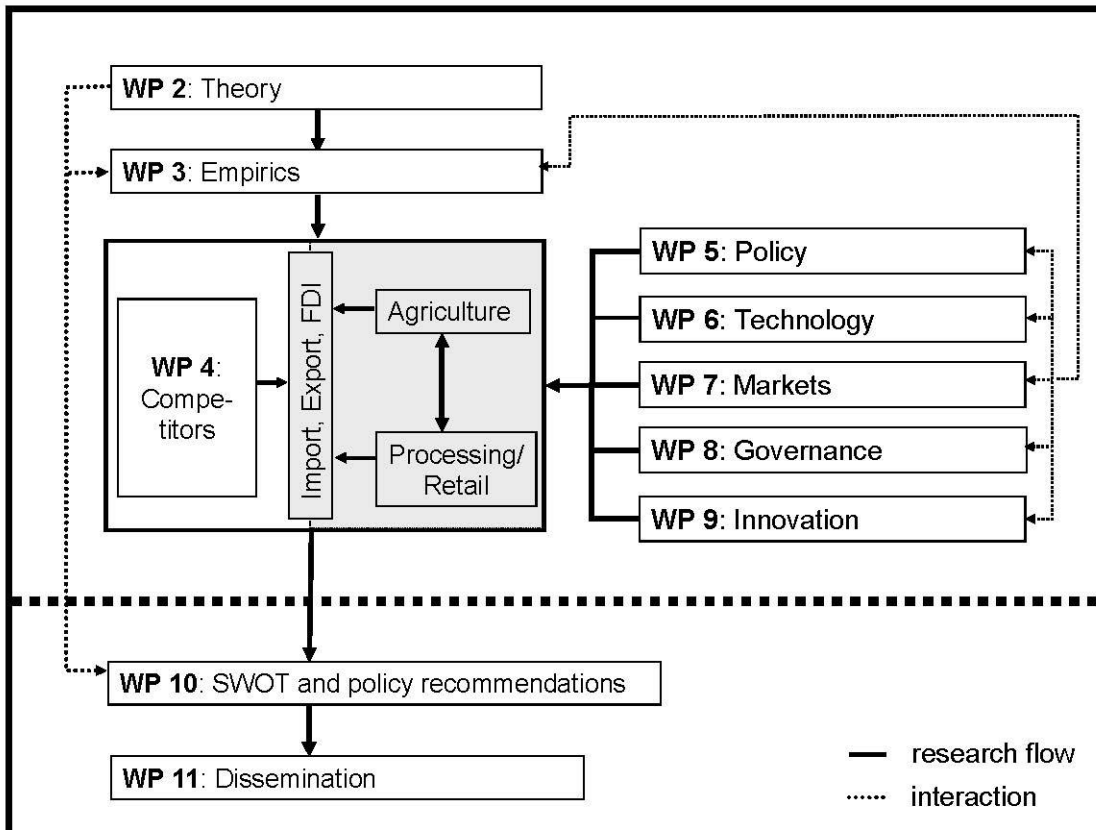# *Competitiveness of food production and processing in the EU*

Heinrich Hockmann, Inna Levkovych

The essential role of EU Primary Food Processors in a strong & competitive EU agri-food sector

292th October, Brussels, Belgium

COMPETE project

Empirics

Determinants of competitiveness

Policy implications

Selected chains: grain, milk, pork, fruit and vegetables

Team

16 Partners from
10 European countries

   10   Scientific partners

    5   NGOs

    1   SME (cooperative)

www. compete-project.eu

IAMO	Leibniz-Institut für Agrarentwicklung in Transformationsökonomien, IAMO, Germany
	Institute of Agricultural Economics, Romania
WAGENINGEN UR For quality of life	Wageningen University, The Netherlands
IP	Univerza na Primorskem Universita del Litorale, Slovenia
CZU	Ceska zemedelska univerzita v Praze, Czech Republic
UNIVERSITÀ DEGLI STUDI DI MILANO DEMM	Università degli Studi di Milano-DEMM, Italy
Newcastle University	University of Newcastle upon Tyne, United Kingdom
Faculty of Economics University of Belgrade	Ekonomiski Fakultet, Univerzitet u Beogradu, Serbia
MTA KRTK KTI	Magyar Tudomanyos Akademia Kozgazdasag - es Regionalis Tudomanyi Kutatokozpont, Hungary
Faculty of Economic Sciences	Uniwersytet Warszawski, Poland
VOD JETŘICHOVEC	Vod Jetrichovec, DRUZSTVO, Czech Republic
POTRAVINÁŘSKÁ KOMORA ČESKÉ REPUBLIKY	Potravinarska Komora Ceske Republiky, Czech Republic
	Balkan Security Network, Serbia
ARERA Virgil Madgearu	Asociaţia Română de Economie Rurală şi Agroalimentară, Virgil Madgearu, Romania
BVE Bundesvereinigung der Deutschen Ernährungsindustrie	Bundesvereinigung der Deutschen Ernährungsindustrie e.V, Germany
FEDERALIMENTARE Federazione Italiana dell'Industria Alimentare	Federazione Italiana dell' Industria Alimentare Associazone, Italy

Outline

Trade performance

Market efficiency

Productivity and Innovation

Policy measures

Trade performance

EU s one of the leading agricultural producers

$\Rightarrow$ EU is one of the largest net exporter worldwide

$\Rightarrow$ Strong export orientation (high self sufficiency)

$\Rightarrow$ high competitiveness

Mutual acceptance of quality standards (organic food, TBT, SPS)

Extension of bilateral and multilateral trade agreements

A number of elements constrain NMS export growth: farm structure, enterprise performance, policy environment, supply chain organisation
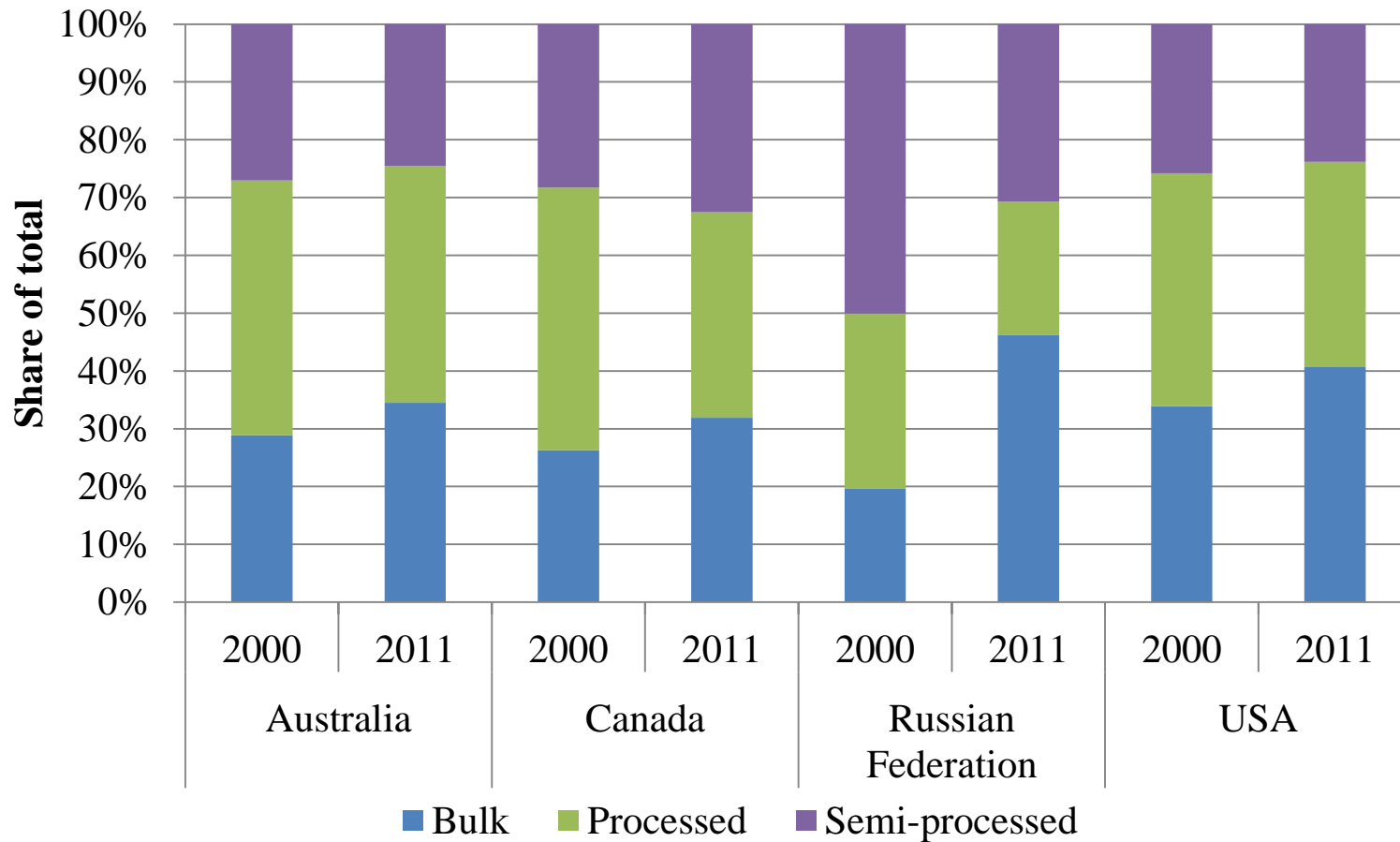
Policy framework for adopting strategies with price and quality competition (minimum wage, energy policy, animal health)

Competitiveness indicators in the EU (grain) (Balassa Index)
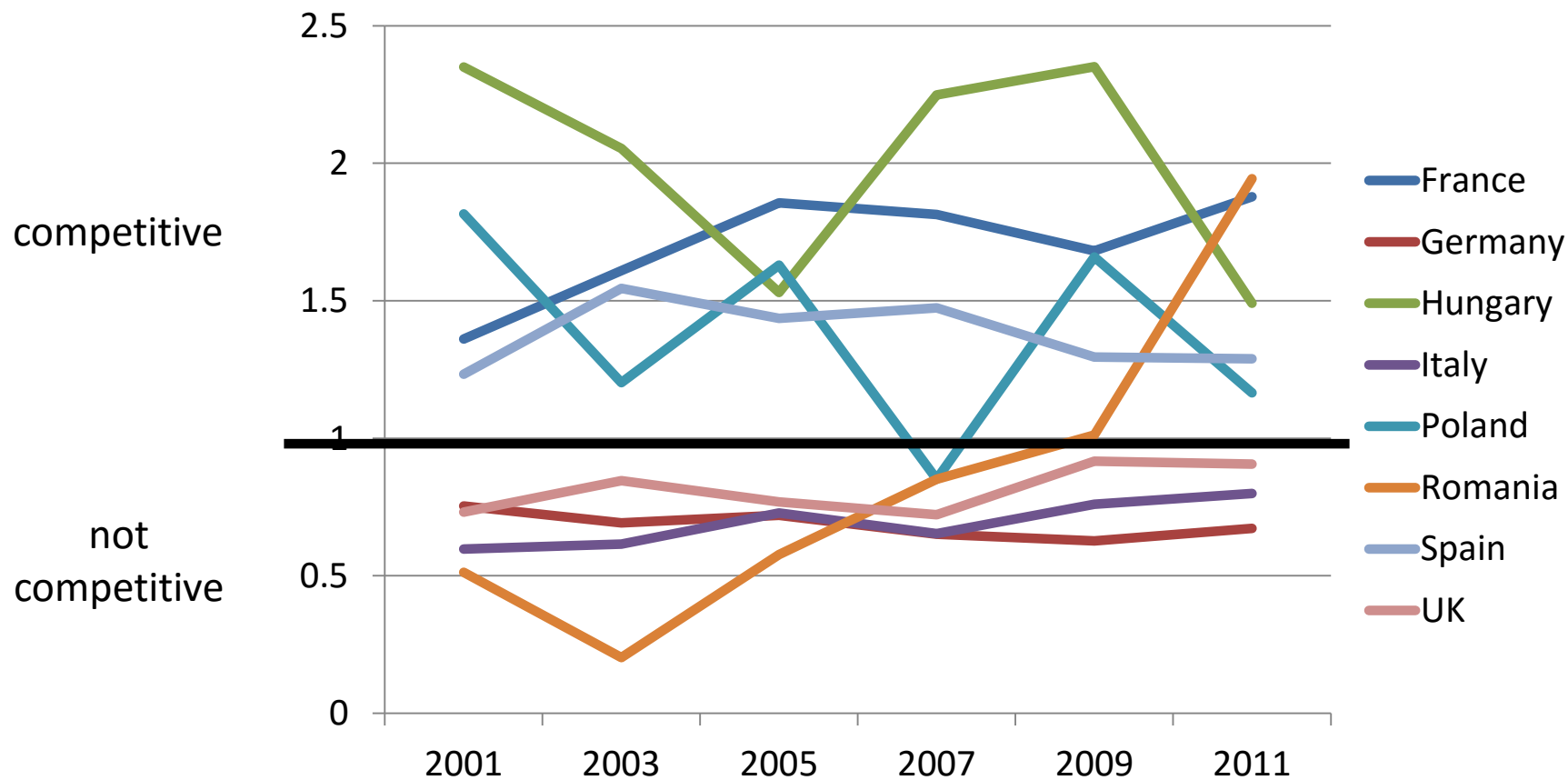
Source: Own calculations based on UN COMTRADE data

Specialisation of major competitors (agri-food exports)

Source: Own calculations based on COMTRADE

Market efficiency

Good and functioning integration between processor and farmers

No abuse of market power by processors

Strong intra-EU competition

Export markets are integrated

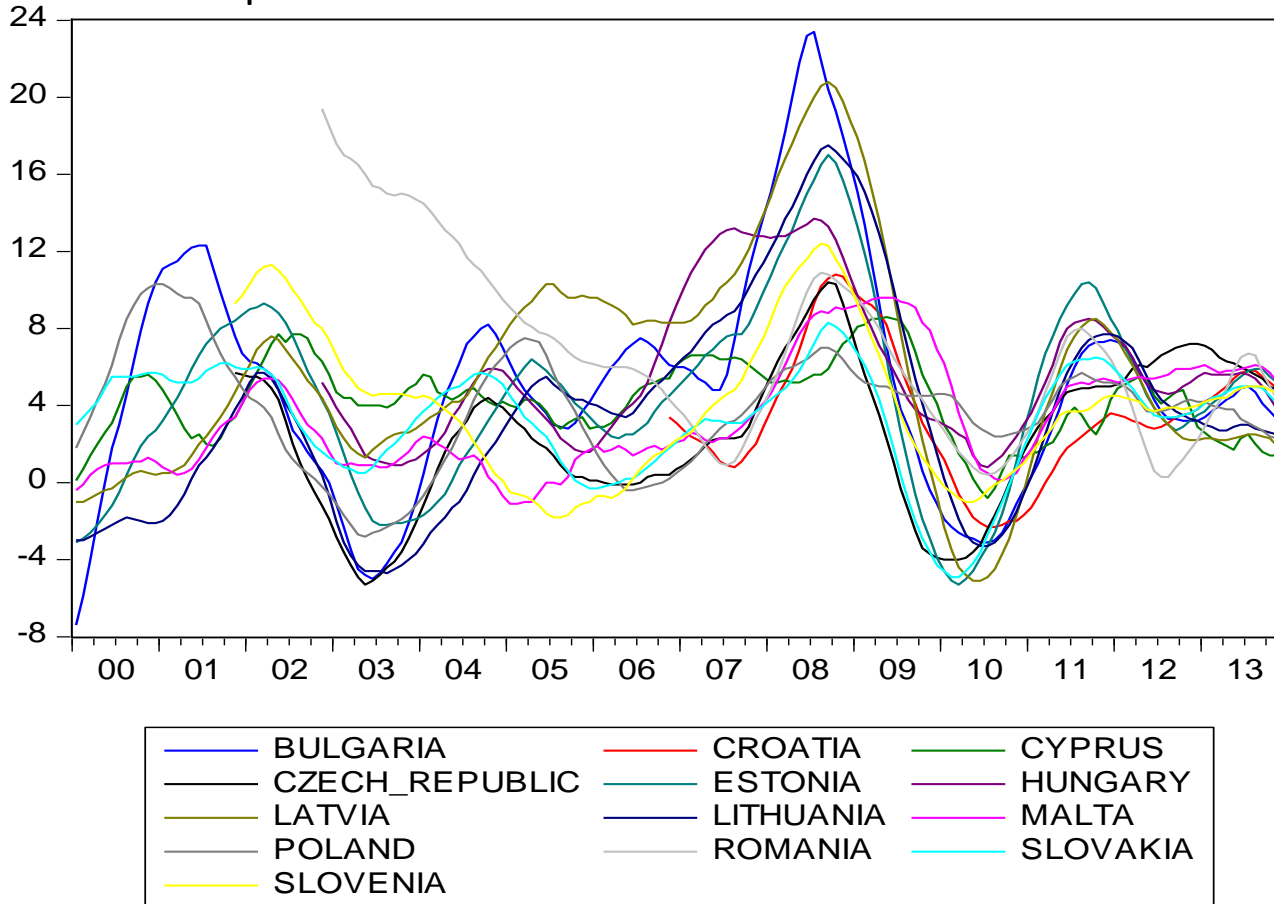High price volatility on international markets

Strong support for the EU single market and improve its effectiveness
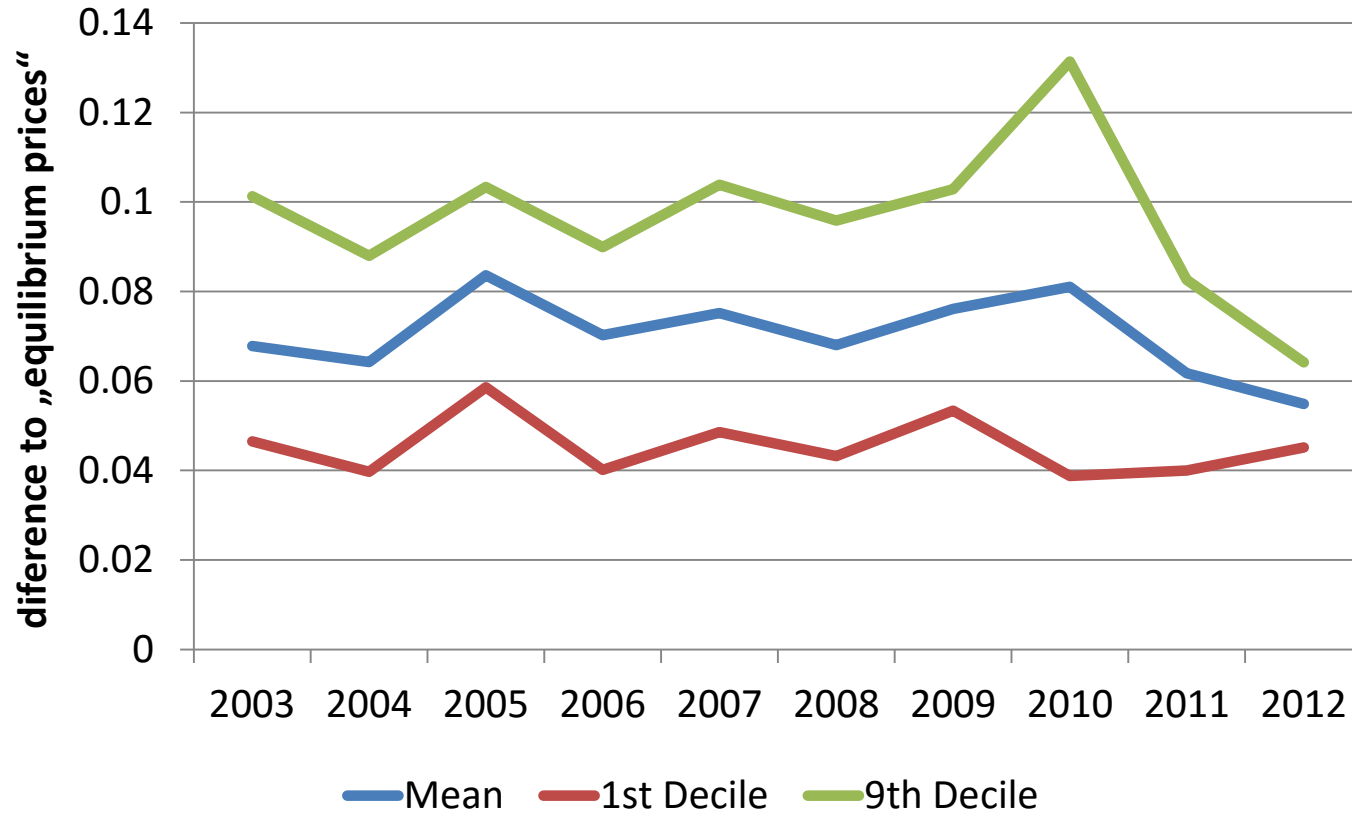
Improve price discovery mechanism

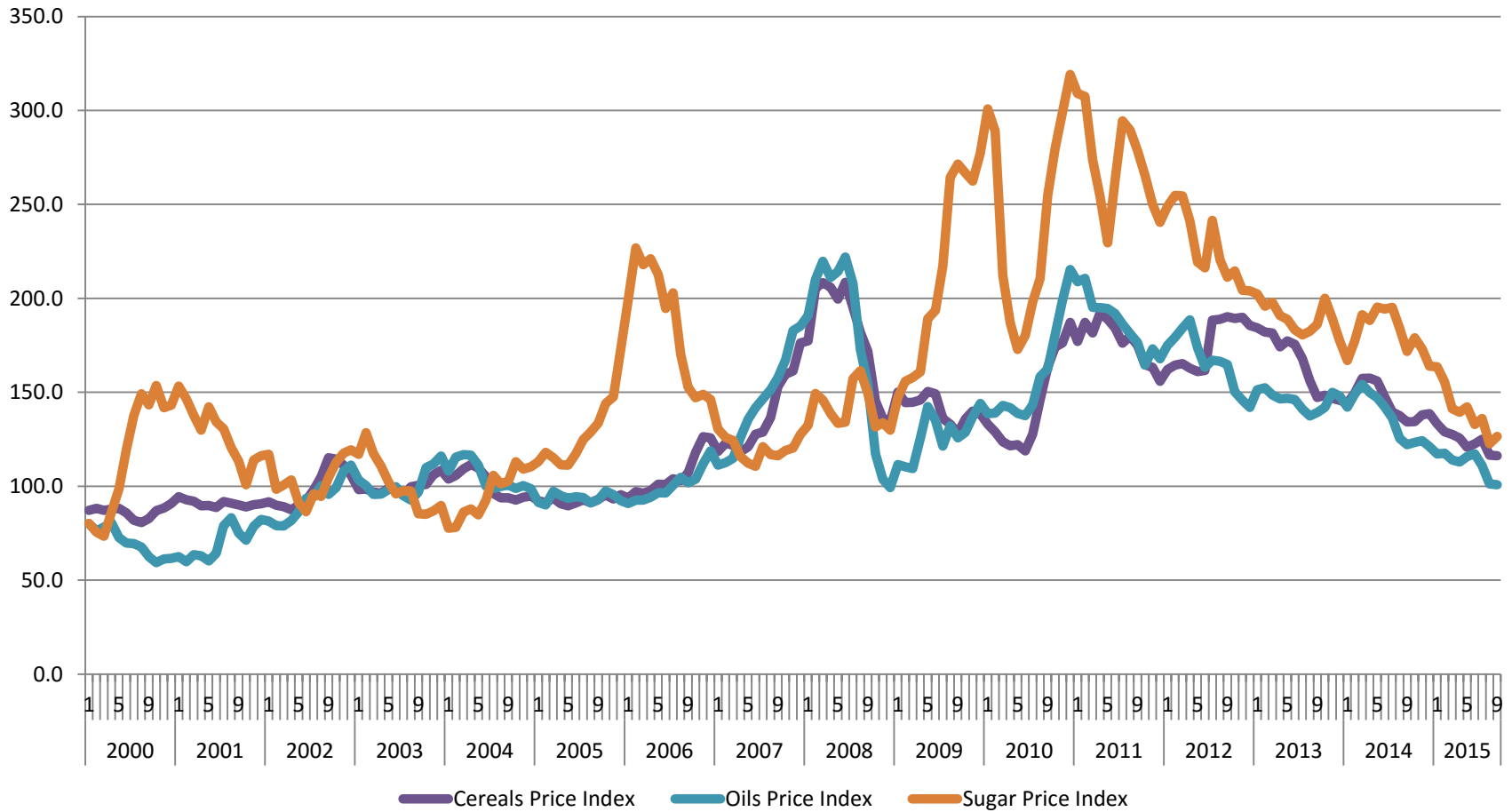# Market efficiency

National food price inflation rates in the EU

Source: EUROSTAT

Vertical market integration
(abuse of market power)

Source: own calculation with Amadeus data

International prices (FAO food price index)

Source: FAO, 2015

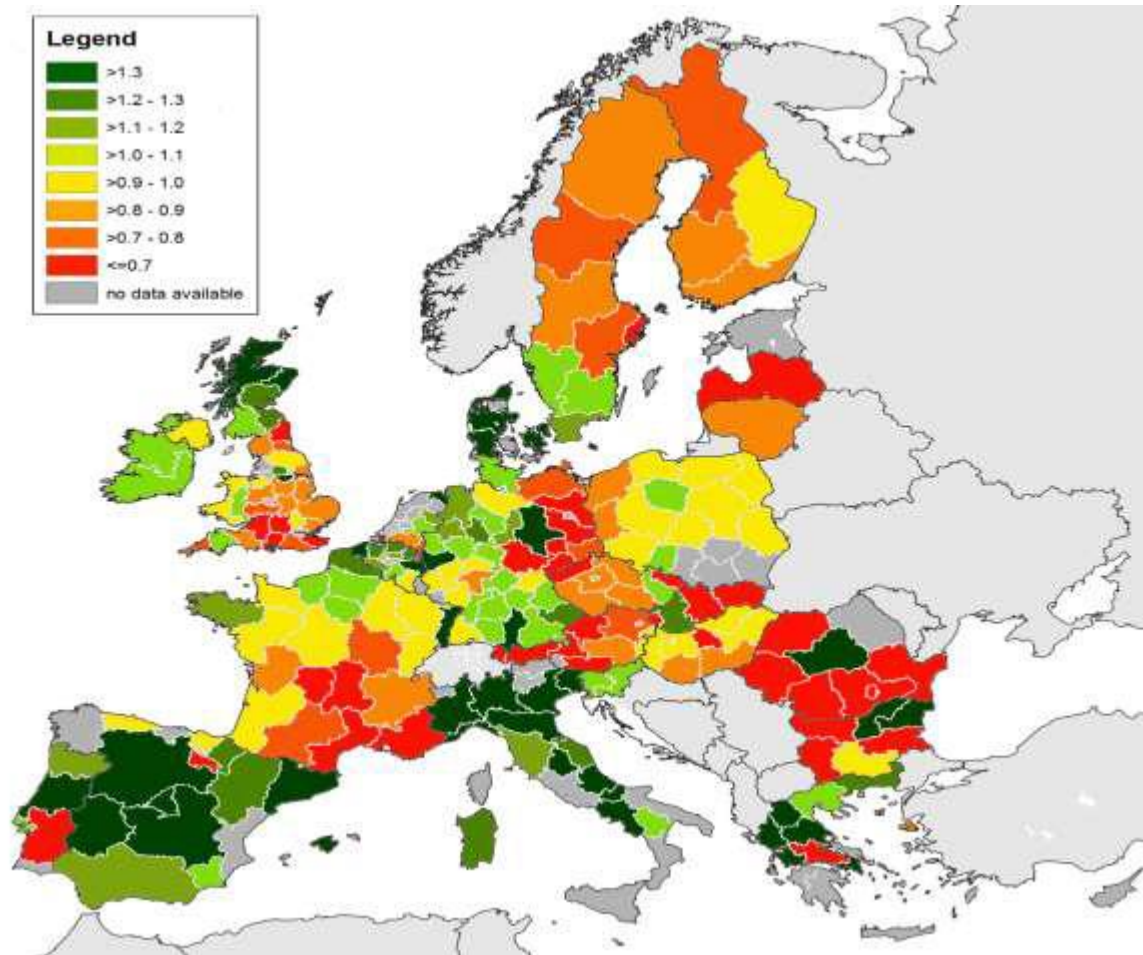# Productivity

On average EU has high productivity

Modernisation of infrastructure in EU member states

Structural adjustments in New Member States

Encourage productivity growth in New Member States

Crucial determinant of productivity growth is access to financial resources

Total factor productivity (crop production)

Source: own calculation with FADN data

Total factor productivity (milling industry)

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Germany	1.195	1.157	1.291	1.257	1.226	1.118	1.152	1.141	1.128	0.994
Spain	1.026	1.024	1.065	1.072	1.015	0.997	1.012	0.997	0.939	1.013
France	1.304	1.297	1.324	1.331	1.219	1.091	1.202	1.228	1.105	1.087
United Kingdom	0.930	0.943	0.999	1.021	0.921	0.865	0.904	0.935	0.854	0.845
Italy	1.088	1.099	1.152	1.160	1.132	1.089	1.058	1.064	1.001	1.020
Poland	0.871	0.912	0.926	0.941	0.922	0.861	0.862	0.894	0.847	
Hungary			1.090	0.960	1.051	0.969	0.994	1.015	0.998	
Romania	0.705	0.771	0.821	0.862	0.955	0.918	0.828	0.830	0.759	

Source: own calculations based on Amadeus

Innovation

Strengthening the agricultural knowledge system

creating sufficient research incentive to appropriate the fruits of R&D (patent laws, non-disclosure, career)

public and private R&D (e.g. basic and applied research)

diffusion of R&D results (licensing)

adoption of innovation

Innovation

Impact of R&D expenditure on performance in the food sector

		lower bound	mean	upper bound	hypotheses
Intercept		5.2877	**5.4962**	5.6871	
R&D		-0.8420	**-0.7184**	-0.6107	accepted
dum_JAP		-0.9488	**-0.7391**	-0.5223	accepted
dum_US		-0.8620	**-0.6526**	-0.4412	accepted
EU15	dum_FR	-2.2963	**-1.8167**	-1.3574	accepted
	dum_GER	-1.3231	**-0.0657**	1.1298	not significant
	dum_NL	-1.0789	**-0.5826**	-0.1175	accepted
	dum_UK	-0.0803	**0.1680**	0.4283	not significant
	dum_IT	-2.6778	**-1.2632**	0.0928	not significant
dum_EU12		1.5048	**1.8977**	2.3401	accepted

Notes: "-" better performance
          "+" poorer performance

Source: own calculations based on COMPUSTAT

Policy measures

Policy focus …

- … on knowledge-based and innovation-driven competitiveness

- … on reducing barriers:
  - ➢ time consuming and complex systems of application and registration
  - ➢ credit constraints
  - ➢ low recognition of labels in the buyers' market

Thank you