

NEWSLETTER

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COMPETE: SOME FURTHER RESULTS

The general aim of COMPETE is to assess the competitiveness of the European agri-food supply chain and gain a more comprehensive overview of the different elements that contribute to their competitiveness to provide better targeted and evidence-based policies at both the EU and domestic level. The project covers different stages of the agri-food supply chain, providing analysis and results for raw materials, as well as products with different degrees of processing.

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INTERIM RESULTS

Total factor productivity in EU agriculture and food processing

A positive trend in total factor productivity (TFP) was found in the majority of EU member countries. Technical change was identified as the most important factor that contributed predominantly positively to TFP development in EU agriculture. However, we did not observe a catching-up process between the regions. The meta-frontier analysis showed that despite a period of almost 10 years after accession, the productivity differences in agriculture among as well as within countries remain substantial.

The analysis of TFP development and efficiency of input use in the food processing industry in 24 EU member states and Serbia revealed significant differences among EU countries, in all analysed sectors. In general, the old member states have higher TFP than the new member states; for instance, slaughtering is characterised by high TFP in Belgium, Germany, Hungary, France, Italy and the Netherlands, whereas the lowest TFP was estimated for the Baltic countries (Estonia, Lithuania and Latvia) and Serbia. TFP demonstrates a positive trend in the majority of analyzed countries, with only Bulgaria and Serbia marking exceptions. Unlike the best-performing countries, where the variation among companies is usually large,

the productivity differences among food processors in the worst performing countries are quite small. The results show that only some countries with average or poor performance are catching up, while countries with high productivity are further improving their performance. In other words, the catching-up processes are not so strong, with countries that cannot keep pace with competitors and those falling further behind.

It was also found that the productivity of European milk production is particularly high in EU countries with predominantly large farm structures and where quota utilization tends towards full utilization. It is assumed that the abolishment of milk quotas will cause European dairy production to be further transferred to high-efficiency regions in Central Europe, resp. the less efficient regions will undergo profound structural change. In addition, the processing industry and primary production appear to benefit each other in terms of efficiency enhancement, meaning that countries with productive dairies typically have also efficient milk producers.

Given that the adoption of innovation is an important factor in determining TFP growth, policy makers should focus their attention on supporting the spread of innovation and expertise to support productivity growth in less-productive countries and thereby reduce the differences among countries in terms of productivity.



Price formation along the value chain

The analysis shows that asymmetric price transmission in farm-retail relationship is more likely to occur in sectors/countries with more fragmented farm structure than with more concentrated farm structures. However, the results point to a positive association between symmetric price transmission and retailers' market power, as measured by sellers' concentration index. In turn, this may suggest that food markets are characterised by imperfections that provide additional benefits to farmers.

Furthermore, price transmission asymmetries seem related to the regulatory framework that governs the operation of the retail sector. On the one hand, our results suggest that asymmetries are less likely in the presence of entry barriers on retail trade compared to operational restrictions that affect shop opening hours. On the other hand, distortions in the price relationship between retailers and suppliers are more likely to occur in the presence of regulations limiting price competition between retailers.

The main message that emerges from these results is that price transmission asymmetry should not only be seen from the perspective of retailer's market power. Indeed, the market structure at other stages of the food chain seems to be equally, if not more, important. Therefore, policy actions that aim at correcting asymmetric pricing could target both upstream and downstream sectors. This seems particularly important for countries/settings where considerable structural changes are still expected. That said, and this is the second implication that arises from our work, one should remember that price transmission asymmetries could result from politicians' actions. It follows that the patterns of price adjustments can be seen as an outcome of complex interactions between various motivations, not only of actors operating at subsequent stages of the food chain, but also political elites.

Market imperfection in agri-food chains for 24 EU member states

How large is the market power at the various stages of the agri-food supply chain? To provide the answer to this question, the theoretical framework to measure the degree of oligopsonistic power in the food processing input market and the degree of oligopoly power in the food processing output market using a stochastic frontier methodology was derived, with the results showing non-competitive behavior in both input and output markets. However, the degree of oligopsony or oligopoly power is not strong. Market imperfections were more pronounced in the slaughtering sector compared to fruit and vegetables, and especially the dairy and milling sector. Moreover, the degrees of both oligopsony and oligopoly power had substantial differences among countries in the EU.



The organic market of main EU competitors: the case of China

The analysis of organic markets of China shows that the organic food industry in the country is externally oriented at present, with around 95% of certified organic production exported. Focus group-based research on the domestic market reveals considerable confusion regarding the meaning of organic, with many participants regarding organic food as a 'high-technology' manufactured product to which some 'artificial additives' or ingredients are added that are 'good to health'. Survey-based research identifies that health consciousness, education and food safety concerns are significant drivers of a positive attitude towards organic foods. Regarding the frequency of purchases of organic food, health consciousness and education are again identified as significant and positive drivers, while age has a negative effect. Taken together, the results suggest that egoistic (personal health related) factors are of critical importance in determining the attitude and purchase of organic foods in China, while wider ethical considerations appear to be of lesser importance than in some EU member states. While the domestic market for organic food in China remains small, there is a demand, particularly from middle-class consumers who are concerned about their health and are well educated.



Price and Quality Competition and Comparative Advantage in the European Union Agri-Food Trade

The competitiveness of the EU in agri-food trade was investigated and illustrated in a series of studies. One of the key measures of competitiveness, the revealed comparative export advantage index, was calculated for the main global agri-food exporting countries to determine their competitiveness on world markets, whereby the Netherlands, France, Belgium, the USA, Argentina and New Zealand were portrayed as highly competitive. The investigation of price and quality competition and comparative advantage in the EU agri-food trade showed that almost all EU countries compete successfully in international agricultural trade via price and/or quality. Furthermore, the analysis revealed that high vertical Intra-Industry-Trade, where the export price is at least 15% higher than the import price, increased for most of the EU-27 member states. This finding suggests that the quality of EU-27 member states' agri-food exports was increased compared to similar agri-food product imports from non-EU countries.

PAST EVENTS

EAAE Seminar, Budapest

The COMPETE team from CER-HAS in Budapest, Hungary was co-organizer of the 123rd EAAE seminar "Growing success? Agriculture and rural development in an enlarged EU" on May 29-30, 2014, with a specific focus on CAP policy in the enlarged EU, their national implementation and impact on economic and social cohesion in the new member countries. COMPETE partners were not only involved in the organization of the seminar, but also presented new results from the COMPETE Project in their individual pres-

entations. Inter alia, topics related to the development of agriculture productivity in EU, inter and intra EU trade, the impact of the EU accession on the competitiveness of agriculture in new member countries (Romanian), intra-industry trade relations, as well as the implementation of EU agri-food quality policy in an enlarged European Union were discussed.

COMPETE Project meeting and Workshop in Capri

The 4th COMPETE Project meeting took place on June 4, 2014, in Capri, Italy, in the context of the WICANEM Conference 2014. COMPETE Partners had the possibility to assess the work progress and express their plans on future research steps. After the closed morning session, the COMPETE workshop "Determinants of competitiveness of the European agri-food supply chain" was dedicated to presenting COMPETE research findings to a broader audience. A number of presentations were organized in two sessions, one on "Effectiveness of Markets" and the other on "Policy and Institutions", which are available at the www.compete-project.eu/activities.

The closing session of the workshop comprised the roundtable "Innovation and competitiveness in the European agri-food sector: the stakeholder's prospect" with stakeholder representatives to discuss the findings of COMPETE within a broader EU and global context. The open session and the roundtable were attended by approximately 40 COMPETE partners and stakeholder representatives from the scientific community, industry and the policy domain.



COMPETE roundtable "Innovation and competitiveness in the European agri-food sector: the stakeholder's prospect"

For a roundtable on innovations in the food industry, the COMPETE team welcomed the stakeholders Niels Dijkman (ABN AMRO, Sector Banker Food) and Willem Posthouwer (FrieslandCampina, Open Innovation Manager).

Both speakers agreed that the geographic origin of food products is increasingly central to consumers' buying decision. However, this trend is somewhat contradictory to the developed global food supply chains of multinational food companies like FrieslandCampina, which buy inputs globally and sell their processed products on the European markets, as well as increasingly in Asia. These companies try to establish and sustain a trust relationship with customers beyond the label of geographic indication. Posthouwer emphasized that competing successfully on global food markets requires the ability to quickly change and adapt production to rapidly altering consumption patterns. The discussants underlined the importance of consumers for the innovation processes in the food industry.



COMPETE Forum in Berlin

In cooperation with the 6th Agribusiness Foreign Trade Congress – the largest yearly networking event of the German Agribusiness and their international business partners and policymakers, the COMPETE Project organized a dialogue forum in Berlin on June 25, 2014. Here, participants discussed the aims and results of the COMPETE research work, as well as the expectations of industry stakeholders.

For more details, please visit www.compete-project.eu/activities

DISSEMINATION ACTIVITIES

2nd COMPETE Policy Brief

On May 29, 2014, COMPETE published its 2nd Policy Brief, highlighting the decreasing market shares of the EU-27 member countries in international agri-food trade. The strong heterogeneity of competitiveness of European agri-food chains and the necessity of strategic, coordinated and market-oriented policy measures were pointed out. The publication is available in English and EU national languages in printed or digital versions. The actual COMPETE Policy Brief and other dissemination materials are available for download from the COMPETE website

www.compete-project.eu/publications



FORTHCOMING EVENTS

COMPETE Workshop and project meeting in Prague

The next COMPETE project meeting will be organized on November 26-27, 2014 in Prague. The preliminary agenda as well as further information is available at

www.compete-project.eu/activities



COMPETE PUBLICATIONS

The COMPETE Consortium launched a series of working papers, which are available for free download at www.compete-project.eu. To secure the quality of the published papers, an efficient, internal revision system was established. The following publications underwent this revision process and are already available on the COMPETE website:

1. Matera, V.M., Dries, L., Pascucci, S. (2014): Innovation in agro-food supply chains – The EU policy context“, COMPETE Working paper N5, March, 2014
2. Gorton, M., Török, A., Tregear, A. (2014): Geographical indications and the competitiveness of small-scale producers: a case of study of the Makó onion PDO, COMPETE Working paper N6, September, 2014
3. Cechura, L., Hockman, H., Kroupova, Z. (2014): Productivity and Efficiency of European Food Processing Industry, COMPETE Working paper N7, September, 2014
4. Bakucs, Z., Bojnec, S., Fertő, F. (2014): Spatial product market integration between two small open neighbouring economies, *Agribusiness: an International Journal*, Vol. 00 (0) 1–17 (2014), Published online in Wiley Online Library, wileyonlinelibrary.com/journal/agr.
5. Bojnec, Š., Fertő, I. (2014): Agri-food exports from European Union Member States using constant market share analysis, *Studies in Agricultural Economics*, 116 (2014) 82-86
6. Bojnec, Š., Fertő, I., Fogarasi, J. (2014): Quality of institutions and the BRIC countries agro-food exports“, *China Agricultural Economic Review*, Vol. 6 Iss: 3, pp.379 – 394
7. Bojnec, Š., Fertő, I. (2014): Export competitiveness of dairy products on global markets: The case of the European Union countries, *Journal of Dairy Science*; published online: July 23, 2014

PROJECT INFORMATION

- Title:** International comparisons of product supply chains in the agri-food sectors: determinants of their competitiveness and performance on EU and international markets (COMPETE)
- Funding:** Collaborative research project (small or medium-scale focused research project), GA N°: 312029-FP7-KBBE-2012-6, total EU contribution is 2,422,725 €
- Duration:** 01/10/2013-30/09/2015 (36 months)
- Objective:** The objective of the COMPETE project is to gain a more comprehensive view on the different elements which contribute to the competitiveness of the European agri-food supply chain in order to provide better targeted and evidence based policies on the EU as well as on the domestic level. The project investigates selected determinants of competitiveness like policy interventions and the business environment, productivity in agriculture and food processing, the functioning of domestic and international markets, the choice of governance structures, and innovative activities in food processing. The research results will enable a congruent, coherent and consistent set of policy recommendations aiming at improving competitiveness of European product supply chain.
- Coordinator:** IAMO, Germany, Prof. Heinrich Hockmann
- Consortium:** 16 Partners from 10 European countries. COMPETE brings together academics, trade bodies, NGOs, agricultural co-operative, industry representative advisory services. In addition, the project is supported by the group of societal actors, incorporating farmer, food processing and consumer associations, providing in-depth knowledge on the agri-food sector and speeding up the achievement of the project goals.
- Contact:** compete@iamo.de
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COMPETE project is coordinated by:

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International comparison of product
supply chains in the agro-food sector