

EDITORIAL

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# Efficiency and coordination in the EU agri-food systems

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## Abstract

During the 52nd Conference of the Italian Society of Agricultural Economists (SIDEA), Italian agricultural economists have been given the opportunity to debate regarding internationalization, competition, and local development in agri-food systems. This special issue of the journal AFE contains four selected papers presented in this conference. These papers focus on three main issues that are strongly affecting the evolution of food supply-chains and their functioning mechanisms. These are the growing role of vertical integration between the farm sector and the downstream sectors, the possibility for farmers to increase their horizontal integration and the role of agricultural policies in affecting these phenomena. The reading of these papers allow for a better understanding of what is affecting the competitiveness of the EU agro-food system, the distribution of the bargaining power along the value-chain and, at the end, the efficiency and economic performances of the EU farm sector.

**Keywords:** Agri-food value chain, Vertical coordination, Efficiency, Common agricultural policy

## Background

Agri-food systems are at the center of relevant changes that have important economic, social, and environmental implications. This is part of an adjustment process which is involving the agriculture sector: the dynamics of agricultural markets in the last decade have been characterized by an increasing global instability which has led to greater international competition, higher volatility of international commodity markets and raised concentration at retailer's level, with an increased asymmetry in market power distribution and conflicts among stakeholders (Garrido et al., 2016; Sexton, 2013).

These dynamics have recently been intensified due to various factors such as climatic change, economic crisis, fluctuations in energy markets, and world trade relations that have worsened the macroeconomics framework. At the same time, demand for food and agricultural products has substantially changed, becoming more complex and resulting from "aware and conscientious" consumption patterns. These latter add value to characteristics such as food quality and safety, place of origin, respect for the environment and ethical and social standards, and food waste reduction.

Changes have occurred to agricultural policies as well. With reference to European Union, attention has to be paid to the reform process which has involved the Common Agricultural Political (CAP) and has promoted the progressive dismantling of price support system in favor of more market-oriented agricultural production (*decoupling*).

The 2013 Reform has completed such process with a definitive switch to a full decoupled support. Core instruments of the new Common Market Organization (CMO), namely supply concentration and organization (e.g., producers' organizations, inter-professional agreements, and contractualization) are aimed at enhancing farmers' bargaining power and supporting farm-incomes, in compliance with tighter competition rules (Del Cont et al., 2012; Bijman, 2015).

Such changes in agricultural markets and policies directly influence the functioning mechanisms of the agro-food systems, the relations among stakeholders in the agro-food supply chains and their development strategies such as food quality improvement, product differentiation, vertical coordination among the value-chain and supply control, enforcement of the competition rules (Carbone, 2017).

Given such a framework, the 52nd SIDEA (Italian Society of Agricultural Economists) Conference, held in September 2015, was focused on the theme "The Value of Food: Internazionalization, Competition and Local Development in Agro-Food Systems". This conference has promoted the scientific debate on the development of the agri-food supply chain facing the increasingly complex challenge of responding to the needs of world's population.

The conference offered the opportunity for a scientific debate on key driving forces affecting the evolution of food supply-chains and their functioning mechanisms. This has allowed to discuss scientific communications of agricultural economists on the emerging organizational models in the global agro-food systems. The Conference was structured around two main plenary sessions. The first one, held at FAO Headquarters in Rome and entitled "Strategies and actors of global agricultural and food policies", had a strong orientation towards international and institutional themes. It promoted a policy dialog between scholars, policy makers, and international organizations with the objective to build innovative models for the governance of global agro-food systems. The second one, held at Tuscia University in Viterbo (Italy) and entitled "Coordination and competition in the agri-food supply chain", was focused on private strategies and public policies governing the increasing relations among the multiple actors involved in the value chain. Around these two main issues, many invited and contributed papers were presented to face the theme of the conference from different theoretical and empirical standpoints.

Four contributed papers presented during the conference have been selected for this *Agricultural and Food Economics* special issue focusing on efficiency and coordination in the EU agri-food systems. These were subjected to the standard peer review process before being accepted for publication on this journal.

## **Report**

The papers of this special issue look at some relevant factors affecting the farm sector. However, all of them fully recognize the interconnections existing within the agri-food systems and discuss these along three main dimensions. These are the growing roles of vertical integration between the farm sector and the downstream sectors, the possibility for farmers to increase their horizontal integration and the role of agricultural policies in affecting these phenomena. Studying such interconnections seems of great importance because these are affecting the competitiveness of the EU agro-food system, the distribution of the bargaining power among its actors and, at the end, the efficiency and economic performances of the EU farm sector.

The paper by Carillo et al. (2017) analyses the effects of vertical integration on the agro-food supply chain. It tests the hypothesis that a greater coordination between food processors and farmers significantly improves farms economic performance. This crucial hypothesis is empirically tested on a large sample of farms producing a typical Italian farm product: durum wheat. In this market, the role of the downstream industry is heading towards a growing control of the quality of products as well as the way it is produced. The results of the analysis, obtained by using a propensity-score-matching model and various economic performance measures, support that indeed a “coordination premium” exists for farms that directly sell their product to the downstream agents. Therefore, such type of vertical integration allows to increase farm competitiveness and profitability, at least in the considered case.

The paper by Velazquez and Buffaria (2017) sheds light on the role of horizontal integration of farmers in affecting their bargaining power with respect to downstream buyers. This integration could be reached by different means including Producers Organizations that are defined by the current CAP. In particular, the Authors also look at how CAP instruments aimed at counterbalancing market inequalities along the chain have been functioning over time. This is done considering the contrasting EU objective to avoid that such instruments could indeed generate a distortion of competition leading to the creation of market power on the supply side. Indeed, the main research question addressed by the paper is whether the current regulatory setting does, or does not, allow to achieve the objective to strengthen the bargaining power of producers while, at the same time, avoid the creation of monopoly power. Furthermore, Velazquez and Buffaria ask themselves whether such instruments have contributed to improve efficiency, farmers’ income, and consumers’ welfare. The authors conclude that there is space for improving the current CMO regulation, in particular, the way derogations to the competition policy are defined.

Aragrande et al. (2017) look at the issue of the competition along the food-chain by using a different approach that is analyzing vertical price transmission in the sugar industry. The issue is relevant because vertical price transmission provide some preliminary indications to assess market efficiency. Indeed, asymmetries in price transmission might reveal the existence of market power along the supply chain. Aragrande et al. (2017) analyze the peculiar case of the sugar sector in the EU that is relevant for two main reasons: the downstream sector is highly concentrated and farm production has been historically managed by a quota regime. In particular, the authors use an econometric model to investigate changes in vertical price transmission linked to the sugar policy reform and to assess the effect of such reform on the sugar retail price. Such results are further analyzed according to the degree of competition and concentration in the EU sugar industry. In conclusion, they show that vertical price transmission asymmetries still exist after the reform. Hence, the current EU sugar market seems far from reaching efficiency even if they conclude that the reform might have created more favorable conditions to improve it.

Madau, Furesi and Pulina (2017) look at another very relevant farm sector that has also been affected by a policy change (i.e., the abolition of the quota system): the dairy industry. They assess changes in technical efficiency and total factor productivity in a large set of EU MS in order to determine which of these countries showed the best performance adaptations during the quota regime phasing out. Their analysis also shows

the technical conditions in which European dairy farmers operated just at the moment of milk quota abolition in order to infer on their competitiveness in such less protected market environment. The empirical results, obtained by mean of Data Envelopment Analysis (DEA) in the period from 2004 to 2012, suggest that dairy farms have small scope for improving efficiency using their own technical input and that the sector has faced a decline in productivity. Madau et al. (2017) conclude that factors other than efficiency can play a greater role in affecting farmers productivity and profitability in the near future. They also discuss about the change of the CAP needed to fit the new and more competitive dairy market scenario.

## Conclusions

The papers that have been selected for this special issue provide insights regarding some of the main issues the European agribusiness sector is facing and the evolving role of the farm sector within it. These papers discuss such issues, propose approaches, and show empirical findings that fuel the debate around these.

This seems important because of at least two main reasons. The first is the need to enlarge the scope of analysis in agricultural economics by considering the relevant changes of the relationships among the agents within the agribusiness sector. The second is the need to rethink the potential role of the Common Agricultural Policy in driving such processes. This is because these will have relevant implications for the economic performance and sustainability of the European farming sector.

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## Authors' contribution

SS developed the background and report of the study. AS conceived the study and its organization. Both authors read and approved the final manuscript.

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## Competing interests

The authors declare that they have no competing interests.

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