

Editorial

In this issue of *Economia agro-alimentare / Food Economy*, we feature two regular Articles and one Note, plus eight Articles included in the Special Issue “Challenges for the development of agribusiness and rural areas”, and four Articles included in the Special Issue “Dynamics and recent trends of varying industries in EU and Georgia: ICTs adoption in supply chain management”.

The topics covered in this issue span from supply chains of specific products, to food security issues, to competitiveness and financial aspects in the food industry, to technical and organisational innovation and the use of new technologies.

The article “Enhancement of food production quality: the truffle case” by Elena Viganò, Federico Gori, Antonella Amicucci, addresses the main problems of the Italian truffle sector, analysing the current regulatory framework, trade and production. The authors surveyed the main stakeholders of the Acqualagna truffle supply chain using semi-structured interviews and focus groups. Issues like traceability, information asymmetry and quality (mainly related to the origin) issues, the small size of the actors and the lack of aggregation and of a system approach are highlighted and discussed.

Oluwakemi Adeola Obayelu and Olusayo Olubisi Idowu, in their paper “Dietary diversity status of rural households in Nigeria: A gendered perspective” aim to examine the food consumption diversity among rural families in Nigeria. The analysis is based on the data provided by a national survey on living standards. The analysis highlighted the differences between the households, also considering whether the head of the family were males or females. The results confirm the importance of gender, together with other demographic factors, as a base for the disparity among households in access to and utilization of available food items. The study finds that dietary diversity was higher in female-led households and that asset ownership tends to improve household dietary diversity.

In the Note “Environmental Benefits of Precision Agriculture Adoption”, Marco Medici, Søren Marcus Pedersen, Giacomo Carli, and Maria Rita Tagliaventi review the literature on precision agriculture to identify the evidence of environmental benefits, including the mitigation of negative environmental impacts of agriculture, and the size of the alleged positive impacts. Forty articles were reviewed considering the variable rate (VR) application of nitrogen, lime, manure, pesticides, insecticides or fungicides, and herbicides. The reviewed literature highlighted opportunities to minimize the environmental impacts through the use of VR technology, but the lack of quantitative data does not allow to make a reliable quantification of these benefits.

Two special issues complete the range of topics covered in this issue of the journal.

The guest editors Nina Drejerska, Mariantonietta Fiore, Antonino Galati, and Jarosław Gołębiewski selected eight papers among the proposals presented at the 25th Conference of the Polish Association of Agricultural and Agribusiness Economists on the theme “Challenges for the development of agribusiness and rural areas” and made sure they were further reviewed and revised.

The second special issue, edited by Zurab Gasitashvili, Giustina Pellegrini, Roberto Rana, and Otar Zumburidze, features a selection of papers derived, after review and further revision, from works presented during the First Joint R&D International Conference on “Dynamics and recent trends of varying industries in EU and Georgia: ICTs adoption in supply chain management”, promoted by the Georgian Technical University and the University of Foggia.

In the next two sections, the guest editors shortly introduce the works they edited.

Special Issue PAAAE25 (by Nina Drejerska, Mariantonietta Fiore, Antonino Galati, Jarosław Gołębiewski)

Agribusiness development represents a key challenge because it creates employment among rural commonalities and can certainly decrease poverty processes. New trends and tasks in worldwide agribusiness are changing fast: practices in agriculture do not have to deal with the quantity of production only but have to be more concerned with delivering customer value and above all multi-diversifying.

On the other hand, the consumer is increasingly aware of new nutritional and health problems and is looking for new product attributes during the buying process. In order to consider the new trends of agribusiness, it is crucial to stress and emphasize the role of the rural areas which have to be reorganized into modern agricultural farms.

Therefore, policies and programs define objectives and tasks by trying to shape agriculture and rural development towards goals of poverty reduction, food security and competitiveness of rural areas. One of the main challenges that the EU addresses by means of Horizon 2020 programme is just to 'Empower rural people and develop better policies', thus strengthening rural communities' capacities for production, fostering economic diversification, as well as facilitating knowledge exchange, innovation and relations between rural and urban areas.

In this context, this issue of *Economia agro-alimentare/Food Economy* was born. The issue has been compiled in partnership with the Polish Association of Agricultural and Agribusiness Economists (PAAAE) to refer its 25th anniversary Congress organized by the Faculty of Economic Sciences of Warsaw University of Life Sciences (SGGW), 11-13.09.2018. The PAAAE congress is organized every year by a university in Poland, where issues related to the development of agribusiness and rural areas are subjects for research and education.

Several of the topics included in this thematic issue were presented during the congress, which general theme was "Challenges for the development of agribusiness and rural areas" and addressed both representatives of science and economic practice in the field of agriculture and agribusiness. The aim was to present the results of research related to the functioning of agribusiness and rural areas. The key goal was to create conditions for scientific discussion and inspire new areas of research providing the knowledge necessary to successfully solve rural problems, create innovative solutions, providing the basis for shaping effective agribusiness and rural development policies and strategies in the future. Specific topic addressed included (1) economic and social factors of agricultural and rural development, (2) operation of agri-food markets and supply chains, (3) competitiveness of enterprises in the agri-food sector, (4) international determinants for rural development, (5) financial system in agribusiness, (6) conditions for sustainable development of the bioeconomy, (7) challenges for the development of agribusiness and rural areas (section in English).

This issue of *Economia agro-alimentare/Food Economy* includes papers on diverse topics reflecting the wide scope of scientific discussion that took place during the congress.

K.M. Łukiewska and M.G. Juchniewicz evaluate international competitiveness of the food industry of the EU countries basing on a set of indicators, as for example share in the global number of enterprises operating in the food industry within the EU, as well as productivity and labour costs. They conclude that the investigated cases confirm the general economic rule – countries technologically advanced are characterized by a higher efficiency of labour, but also higher costs of it, whereas countries less advanced in

technology present lower efficiency and lower costs of labour. As a result, the food industry in less advanced countries gains competitive advantages due to lower costs of labour.

J. Franc-Dąbrowska examines the ‘financialization’ process in countries of Western and Central-Eastern Europe on the example of agriculture. The work investigates agricultural land as a desirable investment resource and how investors from capital markets are moving to commodity markets and speculating on raw materials and agricultural products. The phenomenon was identified as “crawling financialization” for Central-Eastern Europe. Countries whose economies underwent a transformation in the 1990s proved to be resistant to the strong impact of the financial crisis initiated in 2008. The paper also outlines the determinants of the development of financialization in the food sector, and at the same time, the concept of galloping and creeping financialization and its implications for the agricultural sector, with particular emphasis on agricultural land.

The work by S. Kubala and K. Firlej provides an analysis of dynamics and direction of changes in potato prices in the European Union. The authors indicate potato as one of the basic agricultural raw materials in the world characterised by high economic value, mainly through the universal usability both for manufacturers as well as for consumers. Their research results allow pointing out the regional variation of potato prices in European Union countries and the impact of potato production volume and value on the gross domestic product, and of potato import volumes on potato prices.

The authors R. Kata, M. Cyrek and P. Cyrek investigate and assess the changes in the level and structure of food expenses resulting from growing wealth of the European Union (EU) societies. The research allows for positive verification of the thesis that the higher the incomes, the more balanced the structure of food expenses. In addition, the identification of country clusters based on consumption expenditure according to food categories makes it possible to confirm the thesis that there are income differences between economies with different consumption models. However, the authors conclude that their analyses do not allow for validation of the thesis that food consumption patterns among the EU countries become similar, but rather point to the predominance of the consumption divergence processes occurring despite the decline in income differences.

The study of M. Gebska, B. Gołębowska and C. Hubbard aims to examine consumers’ awareness regarding farm animal welfare indicating that the growing public concerns are given to this topic. The authors investigated Polish consumers’ attitudes towards animal welfare when making decisions on purchasing animal products. Research results show that less than 50% of farmers being consumers of animal products have encountered the concept of animal welfare. In the case of the non-farmers, the share of respondents

familiar with the concept of animal welfare was lower (38%). It means that the concept of animal welfare is still not well known and if an increase in interest in the issue of animal welfare is to be expected, it is necessary to increase awareness of it in society.

G. Ślusarz and Marek Cierpiął-Wolan, in their work, try to find out to what extent small and medium enterprises, dominating in the economic structure of rural areas, solves the key problem of labour market imbalance and population migration in environmentally valuable areas. The research results confirm that the non-agricultural economic activity sector is less developed in areas of high natural value. Despite positive developments for the enterprises, their potential is too weak to provide an economic base for addressing unsustainable labour market problems, as evidenced by high unemployment and a highly negative migration balance. Authors concluded that this limits the use of the endogenous potential and is not conducive to the concept of multifunctional, sustainable development.

Then, the paper by J. Gołębiewski, J. Takala, O. Juszczak and N. Drejerska stresses the concept of circular economy as becoming increasingly important for different groups of stakeholders. The authors recognize existing local solutions of circular economy (i.e. biogas plant) as well as identify possible ways for its development (i.e. through cooperation with academia and foreign experts) with a special regard to the waste management issue, as this is one of the crucial areas of circular economy for which local authorities are responsible for. Implementation of the circular economy principles requires undoubtedly interaction and cooperation between local self-government, the business sector and an effective education system.

The last paper by L. Wicki and H. Dudek evaluate the relative importance of the selected inputs for cereals yields in Poland, especially the importance of certified seed, applying two methods: interpretation of estimated parameters in Cobb-Douglas production function and analysis of squared semi-partial correlations. The results of both methods are similar. The paper argues that the least “pure impact” is connected with certified seeds, medium impact to chemical originated inputs (fertilizers and pesticides) and the largest impact – to soil quality. Domination of chemical inputs in yield formation is visible. It was also stated that the interaction of four inputs constitutes from 35 to 62% of the total influence on cereals yield. From this perspective, it can be concluded that the level of all other inputs has to be adequate to soil conditions, and one of the most important factors is the interaction between variety, soil and fertilizing.

Finally, the contributions of this special issue highlight different facets of the agricultural economy that are subject of current investigations and reflect business practices. Undoubtedly, this special issue provides a rich body of work for further studies on challenges for the development of agribusiness

and rural areas and we hope that it will provide the readers with food for thoughts for their own work and research.

Special Issue JORDI2018 (by Zurab Gasitashvili, Giustina Pellegrini, Roberto Rana, and Otar Zumburidze)

In this special issue, we present a selection of papers from the First Joint R&D International Conference on titled “Dynamics and recent trends of varying industries in EU and Georgia: ICTs adoption in supply chain management”, organized by the Georgian Technical University (GTU-Georgia) and the University of Foggia (UniFG-Italy). This event was held in Tbilisi on October 17-19, 2018. The Georgian-Italian conference was organized by GTU International Relations and Standards Office in collaboration with the University of Foggia and the research group lead by Prof. Francesco Contò, Director of the Department of Economics. Four papers were selected and further reviewed and revised. The papers cover several aspects of technological innovation in the Georgian and European industry.

In the current digitalized world, the technologies and their use in each area of life become increasingly crucial as technology can be used to assist people in meeting their developmental needs.

Technological innovation in the industry sector represents a key factor to contribute to increasing productivity, efficiency and employment in different economic sectors, promoting economic and social growth, reducing poverty, improving sustainable manufactory industries. For instance, the adoption of Information and Communication Technologies (ICTs) can provide new business breakthroughs and fast reaction to a variable demand by manufacturing companies. ITCs are powerful tools for the industry, becoming critical for many sectors. In fact, their adoption provides new opportunities, as well as discloses novel and unforeseen application scenarios.

According to the World Economic Forum, an increase in the digitalization of a nation by 10% would lead to a 0.75% increase in GDP per capita, and more than 1% drop in the unemployment rate. Consequently, ICTs can play an important role in all the global economies creating new sources of income and new jobs, and at the same time by reducing the cost of access to health and education services. However, digital technologies have also a remarkable potential to improve the agricultural sector, contributing to achieving significant benefits. For example, the application of information technology in the agricultural sector can lead to more sustainable products.

Supply chain management is a central part of most businesses and represents a fundamental tool for reaching company success and customer

satisfaction. The success of any business is inextricably linked to the performance of the supply chain. Therefore, the possibility by the digital innovation to develop efficient supply chains, well managed, allow to reduce the use of resources and to decrease the release of the unnecessary environmental pollutions. As for the societal aspects, this technology can lead to changing in the sanitary management with an improvement of human healthcare.

This special issue of *Economia agro-alimentare/Food Economy* on “Dynamics and recent trends of varying industries in EU and Georgia: ICTs adoption in supply chain management” was born in this context. Several of the topics included in this thematic issue were discussed during the conference. This was addressed to both scientists and practitioners in the field of technological innovation. The aim was to present the results of several case-study research studies related to digital innovation in supply chain management. The key goal was to create conditions for scientific discussion and inspire new areas of research providing the knowledge necessary to spread digital innovation, create innovative solutions, providing the basis for shaping effective manufacturing development policies and strategies in the future.

This issue of *Economia agro-alimentare/Food Economy* includes papers on several topics reflecting the wide scope of scientific discussion that took place during the congress.

I. Shalamberidze and M. Akhobadze study how to implement a unified web platform including website, Google Maps, pointing object in the map, saving the objects and their parameters, mathematical and programmatic tools, cloud computing, python computing libraries, Restful API as a web service, for better management of the cities/region. This research allows one to see the whole chain of interactions, which are caused by the actions on any object of the city.

V. Chkoniya, A.O. Madsen and T. Coelho study the fish supply chain in Portugal by means of two different surveys: one related to purchasing behaviour and the other focuses on consumption attitude. They used the results of this study to build a support for the coming generations by designing communication strategies for fishing sector, including point-of-sale communication, underlining the issue of shopping experience, which in the case of young consumers is, very closely linked to ICT, based on creating sustained value for society underpinned by a relation of cooperation and proximity.

N. Chkhartishvili, L. Mamasakhlishashvili, I. Tchanturia, D. Bakradze examine the first case when the rare Georgian white grape variety Chvitiluri has been studied according to its ampelographic, ampelometric, phenological, chemical and oeno-caprological characterization. Except for the grape

variety, it was the first enological research focused on Chvitiluri wine as well. The authors evaluate different parameters such as the alcohol percentage, total phenols colour, taste, aroma. On the basis of these data, the rare local variety can be presented as a perspective sort for wine production.

N. Adamashvili, F. Chiara, M. Fiore analyse the results of worldwide implemented projects and strategies related to food losses and waste (FLW). Their research results confirm the importance of a bottom-up and cross-sectional approach to facing the sustainable use of resources and FLW reduction and for making it more manageable over time. Additionally, a collaboration of all parties such as producers, consumers and policymakers, is crucial is needed in order to achieve the common goal of sustainability. The results could be useful insights to build new initiatives that need to be supported by policymakers. Thus, a collaboration of all parties such as producers, consumers and policymakers, is crucial in order to achieve the common goal of sustainability.

Final remarks

All the papers in this issue are published in English, and we feature authors from many countries, namely from Italy, Denmark, the UK, Nigeria, Poland, Finland, Georgia, and Portugal. The range of the analysis spans from local, to national, to international.

This is the last issue of our journal that is published according to the traditional academic publishing model. The next issue of the journal *Economia agro-alimentare / Food Economy* will be published according to an Open Access model. The journal's evolution path is following the dominant trends in scientific publishing, which is progressively shifting the costs of publishing research results from users to researchers and funders. We believe that it is too early to assess whether this new paradigm will bring more advantages or more disadvantages, in any case, the new opportunities and new constraints that this change is bringing are evident. Our effort is in the direction of ensuring a smooth transition to a model that makes the results of scientific research at the same time reliable and accessible. We are confident that this innovation will allow the journal to increase its impact in the academic community and allow authors to disseminate their research results easily. This move is also in line with the increasingly binding policy of publishing freely available articles, pursued by many research funders.

As usual, the Editorial Board encourages prospective authors to contribute to the journal by submitting their research work, reminding that the next articles will be subjected to an Article Processing Charge.

The editors and the SIEA Presidential Board are very grateful to the guest editors who collaborated in the creation of the rich and extremely interesting special issues published by the journal in 2019. We are also extremely grateful to the reviewers who helped us to evaluate the papers submitted to *Economia agro-alimentare / Food Economy* during the year 2019; the complete list is available at the end of this issue.

We recognize and appreciate once again the support of our community of authors, reviewers and readers, and we count on their continued commitment also in the future.

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