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FOREWORD

Agriculture is a vital economic sector that witnessed the boom triggered by unprecedented increase in food demand due to demographic growth to be replaced by fierce global competition accompanied by strengthening of various constraints on the background of global crises like financial and ecological ones, depletion of natural resources or hegemony disputes.

Despite the fact that the agriculture of the 21st century is a sophisticated industry that is based on innovation-driven technology, such dramatic change cannot be properly addressed by relying on the analysis of previous trends. Coping with the novel constraints calls for knowledge support for both policy making and businesses in agro-food and environmental economy to be enriched with cutting edge information provided by approaches built up from multiple perspectives applied on the main challenges such as globalization, food security, rural development, climate change impact, vulnerability of the food system, perspective of scarcity for the natural resources that support agriculture, adequacy of agriculture and environmental knowledge systems, amongst others.

The third edition of the Competitiveness of Agro-Food and Environmental Economy (CAFEE) conference, at the Bucharest University of Economic Studies, addressed the need to improve the knowledge support by bringing together leading experts, decision-makers, and professionals to capture the research energy devoted to the analysis and assessment of developments and challenges of agro-food and environmental policies and businesses within the framework of globalization and European integration.

The studies comprised in the proceedings of the CAFEE conference are addressing a variety of issues that are presented from different perspectives revealing on the one hand the manifold implications of policy making in agro-food and environmental economy, and on the other hand how local contexts create situations that need in depth analyses and interpretations in order to find solutions that are aligned with the principles and guidelines provided by global and European approaches.

The overall picture built up by the results of the studies reveals that increasing the competitiveness of agro-food economy necessitates a strategic approach underpinned by the better understanding of key aspects such as labour, resource management, market access, cooperation, and investments.

Modern agriculture is intensive in machinery and/or knowledge, but labour continues to be important for various reasons including the structure of agricultural holdings or the favourable outlook of more labour intensive systems such as organic farming. Hence, an appropriate approach for labour analysis in agriculture remains an important issue for policy making and it should consider the unit of labour, labour shortage, and better management of training. In Romania, family is proposed as the most appropriate unit of labour due to the specific patterns of labour division in the rural family (G. Popescu). The reasoning is strengthened by the findings for Serbian family farms that are reported as having a key role to play in speeding up rural development (J. Streten et al.). Labour shortage is unlikely in competitive contexts, but it could represent a threat then agricultural employment is unable to provide acceptable incomes.

Improved regulation of self-employment in rural areas is needed in order to create better conditions for the absorption of European funds allocated for supporting young farmers (R.A. Candoi-Sandu). Regarding the management of training for farmers and employees in agriculture there it is recommended the adjustment of publicly funded students within each major fields of study with the medium and long term needs and trends within the national and European agro-food economy (G.C. Cretan). Increasing the quality of human resources involved in the management of structural funds at both public level and beneficiaries is also important for supporting the competitiveness of agro-food economy within the current context of the European Union (C. Cirstea et al.). An issue of concern remains the low accessibility of higher education for rural youth threatening their active participation in the knowledge transfer that should support the development of competitive agricultural holdings (M.C. Preda).

The natural resource that supports the agro-food economy is land that could be used for a variety of crops according to the patterns of soils and weather conditions and the availability of water. The proper management of this resource depends on clear-cut property relations that will incentives owners to maximize their benefits. The turmoil created by the shifting and unstable political regime created bias on the establishment and transaction of property over land hindering farmers' ability to apply performing technologies. Maturation of property relationships, creation and development of land market, and agreement over the proper relation between small and large size agricultural holdings should be considered with priority in this direction (G. Popescu), while absolute pre-emption for local communities, treating land as national asset and facilitating loans for land acquiring (E.S. Butnaru) are other measures that could improve the management of the most important natural resource for agriculture. Amongst the solutions that were analysed in more detail is the lease of land, which would create the premises for creating larger plots able to support technology intensive performing agriculture (E. Musat).

Obtaining high yields is not enough for a competitive agro-food economy since food markets are in fact flooded with large amounts of products originating from intensive systems mastered by farmers of the developed economies. This created a high volatility of prices that threatens food security by restraining the access to food products, but also the food producers who might fail to cover their expenses (B. Bazga and L. Rebega). In this challenging context a special focus should be granted "for the creation and expansion of functional local markets" building on the already existing transaction centres that belong to the distribution chains (G. Popescu). Addressing dynamic market segments such as the organic or quality food market should be also considered, since the statistics for industry sales are impressive indicating that the demand for organic and quality food is growing fast (M. Stoian and D. Boboc; O.G. Stanila and F.M. Rainof). Moreover, since the underdevelopment, excessive fragmentation, low productivity, and lack of financing eroded the competitiveness of most farms, organic systems represent a good opportunity for the market access of Romanian farmers (S. Stanciu).

Cooperation could be a key process for "establishing a proper ground for the harmonious interplay of commercial and civil interests toward an increased resilience of agricultural and rural areas against a volatile economic system triggering the interference of disturbing short term political interests." (G. Popescu) and it allows

"the creation and exploitation of resources based on a new social model (...) and on a capitalized form of solidarity" (D.C. Popescu). Empiric evidence also supports this reasoning and it is reported for Calarasi county where the economic and social standing of cooperative members were higher than the ones of individual producers (R.A. Ionescu). As factors that prevent faster progress toward cooperation in agriculture there are reported the perception of risk by smallholder farmers who fear the relinquishment of their land, the unsuitable legal framework and the lack of effective financial instruments (D.C. Popescu).

The competitiveness of agro-food economy is also depending on investments made in this sector. These should take in account the wide range of interdependencies that influence the calculation of economic efficiency, but also the fact that turnovers might decrease as it occurred in many regions of Romania. Nevertheless, the implementation of measure 121 (Modernization of agricultural holdings) is promising, the investments made resulting in higher incomes and modern equipment purchased for the increase and diversification of production (A.M. Sandu). Encouraging investment would need improved tools for risk management in order to enable beneficiaries of European funds to support the co-financing of their projects (I.E. Petrescu), but also streamlining investments in processing industry (J. Subic et al.).

Other issues that are of concern for the competitiveness of agro-food economy are performing management and knowledge transfer. Improving management in all areas of the agro-food system, but especially in agriculture is necessary for ensuring the implementation of good agricultural practices and to properly use the benefits of the agricultural policy (R. Voicu ad C.V. Radulescu). It is also necessary to create a functional knowledge market that is able to host operative and efficient linkages between producers (researchers) and consumers (agricultural holdings) of new information that generates value added (G. Popescu).

The studies that considered the agro-food economy within the environmental restrains examined the impact of climate change, the pollution generated by agriculture, but also the promising sector of the organic farming.

Based on empirical evidence from Romanian vineyards it was concluded that climate change would impact more on the quality of the products than on the yield. In case of the wine, which is the final product, this could lead to a negative impact on competitiveness, since in this sector the value added is related more to quality of the products than to the amount of the production (M. de Salvo).

Agriculture as source of pollution is analysed in three settings, but all of them are focusing on the emissions of greenhouse gases. One of the studies presents the results of an empirical analysis conducted for the intensive livestock breeding in Italy. It reveals that despite important progresses there are still many farms that fail to comply with the requirements of European legislation. Such situation could be prevented by increasing the awareness level among consumers regarding the importance of purchasing certified meat (I.V. Dragulanescu). The other study also presents the emissions sources of agriculture, but it pursues to outline solutions for increasing agriculture's contribution to climate change mitigation. It is stressed that although technical challenges might be important, the creation of an enabling economic framework would have a more meaningful contribution towards emission reduction, because the important challenge in agriculture is to maintain profitability within

the "sharp blades" of global competition (A.M. Calin and A. Diaconu). Finally, a detailed EU level analysis of energy consumption and emissions in agriculture reveal important progresses that are interpreted as outcomes of the more and more effective climate policy action (A. Zaharia).

The perspectives of organic farming are outlined based on trends captured by the analysis of global, European, and national data. It was reported that although organic food represents 1-2% of the total food production, the organic food sales are growing fast, significantly outpacing sales for conventional food products. Germany is the largest consumer of organic food in Europe and the second one in the world, while in Romania the production side is better represented than consumption (M. Stoian and D. Boboc; S. Stanciu).

Environmental economy studies addressed the major challenges of climate change, biodiversity, and urban pollution at different scales. The pool of solutions that was examined comprised mainly market based tools revealing on the one hand their potential to foster the development of a greener economy, and on the other hand the most important barriers that prevent a more dynamic progress toward sustainability.

The economic opportunities created by the implementation of environmental policies are not the most attractive investments, but interplays occurring within globalized markets could lead to less predictable outcomes. This was demonstrated by an analysis of the European climate policy. Hence the EU ETS carbon market allowed the accumulation of surplus allowances by several large companies that besides harnessing million dollar windfall profits threaten the entire functionality of the system (F. Bran et al.).

The need for economic underpinning of environmental protection was explained for nature conservation by a study that pursued the steps of paradigm change in this field. It reported that biodiversity and ecosystem services are natural assets playing a key role for the economic strategies (N. Istudor et al.). Empiric support in this direction was provided by a cost analysis in case of a protected area that differentiated four categories of expenditure: technical assistance, investments in conservation measures, management and infrastructure (C. Negrei).

The proceedings of the CAFEE conference provide meaningful insights for many challenging aspects of the agro-food and environmental economy. These serve the knowledge development for both top-down and bottom-up approaches. Hence, there were addressed topics born within the process of downscaling global and European issues to national and regional contexts, as well as issues that are of major interest at local level. The reported results have a good potential for improving our understanding of factors that control the progress toward sustainable development within the restraints of a competitiveness driven agro-food and environmental economy.

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