

TOWARDS A CONCEPTUALIZATION OF A NEW FOOD PRODUCTION SYSTEM IN SLAVONIA AND VOJVODINA

Sofija Adžić, Ph.D.¹, Đula Borozan, Ph.D.²

¹University of Novi Sad, Faculty of Economics, Subotica, Republic of Serbia, sadzic@ef.uns.ac.rs

²Faculty of Economics in Osijek, Republic of Croatia, borozan@efos.hr

Abstract

This paper explores the strategic framework for developing new food production system in Slavonia and Vojvodina. Although the both regions are located in the different states, they have been facing with the same transitional challenges in this area. The main aim of this paper is to unveil them having in mind the European trends. The research method is based on the analysis of the factors that block or slow down the institutional and market impulses coming from the European environment in high value added food production. An insufficient supply of authentic (regional), productive entrepreneurship and the low efficiency of regional innovation system are identified as the main barriers. According to the suggested recommendations, new food production system in Slavonia and Vojvodina should be based on auto-poiesis and co-opetition principles. The crucial precondition is that all participants should be focused on achieving the desired results in ways that benefit a variety of interests.

JEL Classification: L66

Keywords: food production system management, Slavonia, Vojvodina

1. Introduction

As a complex set of dynamic interplay of mutually reinforcing activities that generate food products for human consumption, a food production system has attracted growing interest not only among scholars in different fields, but also among politicians, media, farmers and others. This is largely a consequence of the current threats and issues related to food such as shortages of food, depletion of natural resources, climate changes, overuse of pesticides and other chemicals in food pro-

duction, etc. Furthermore, moving toward a more efficient, competitive, export-oriented, healthier and more sustainable food system is a process that involves tackling longstanding challenges and addressing more sophisticated demands at both the theoretical and the empirical level. A food production system is evolving with regards to climate conditions, natural resource endowments, innovativeness and creativeness of the participants, and by the quality of institutional structures and policies.

This paper focuses on the food production system developed in Slavonia and Baranja (hereinafter referred to as “Slavonia”) and the Autonomous Province of Vojvodina (hereinafter referred to as “Vojvodina”). Slavonia is a historical region situated in eastern Croatia. It covers around 22% of Croatia and it is inhabited by 805,998 people, i.e. 18.8% of Croatia’s population, while Vojvodina covers slightly less than 25% of Serbia and it is inhabited by 1,931,809 people, i.e. 25.76% of Serbia’s population according to their respective bureaus of statistics. Vojvodina is an autonomous province of the Republic of Serbia situated in its northern part. The economies of both regions are largely based on food and processing industry and fertile agricultural soil. With the average gross domestic product (GDP) around 8,330 USD per capita in 2010, Slavonia (which includes five Croatian counties) is lagging behind the national average (13,323 USD per capita), while Vojvodina has GDP per capita higher than Serbia (e.g. in 2007, GDP of Serbia was 5,476 USD per capita, whereas Vojvodina’s GDP is estimated to 6,848 USD per capita).¹ Before 1991 Slavonia and Vojvodina were parts of the two socialistic republics of former Yugoslavia (Croatia and Serbia, respectively).

Although in the last two decades Slavonia and Vojvodina have been developing within the framework of two different states, their food production systems still have the same characteristics. They produce a wide range of food, from primary agricultural products to highly sophisticated ones. However, they produce these products not only in an inefficient and ineffective way, but also without taking into account European or world food needs and demands. The same holds for the related and supportive sectors and industries to the food production system, including logistics, transport, finance, telecommunication and information services, educational and R&D activities, as well as for services provided by different government institutions.

¹ Sources: for Croatia - Croatian Bureau of Statistics (2013), and for Vojvodina - Kis & Cileg (2011).

The main goal of this paper is to unveil critical issues related to the creation of a new food production system in Slavonia and Vojvodina. Consistent with the main goal, this paper also briefly analyzes new European trends and their implications on the food production system in Slavonia and Vojvodina, conceptualizes the framework for a preferred structure of the food production system, and discusses the necessary changes that will transform this system into a competitive and export-oriented one.

2. Basic characteristics of the existing food production system

The food production system in both regions has continued to develop according to the old trajectory that was established in the early phase of the free market transition in the 1990s. Over the time, the authorities that participated in this process have failed to understand the new and evolving challenges and create a friendly and fair business environment for production and exports of high value-added food products. At the same time, farmers have been more oriented to collect more and more state and local incentives and subsidies without serious considerations of new production and business management methods as well as new crops.

The ongoing recession in Slavonia and Vojvodina has only intensified the development of entropy accumulated in the food production system during the past. Certainly, the recession opened a whole range of new and more complicated issues compared with the past two decades. However, it was clear before the current recession that lots of things had to be done, starting from the essential to pure technical changes. Problems, resistance and costs, being generated in the phase of free market transition, are definitely less than the ones both regions are currently facing in the process of building a new food production system. Bearing this in mind, one can conclude that the main policy authorities of the food production system were not aware of the importance of strategic thinking and managing the food production system as well as of its orientation towards a highly competitive and innovative one. At the same time, farmers were not aware that they are primarily responsible for their own productive and financial performance.

Because of that, any significant and qualitative growth in resources, innovativeness and competitiveness did not take place, and consequently, sustainable development swings did not appear. For example, instead of increasing capital-intensive production and the share of investment in value-added food processing, chronic disinvestment and a widening gap between the value of processed food imports and

exports are recorded. Similarly, instead of multiplying, growing and improving the performance of productive entrepreneurship and human capital, unproductive and even destructive entrepreneurship has been growing even faster. Regional innovation systems are not established and continuous technological progress failed to occur in this area. The aforementioned and many other issues are the consequences of poor understanding of the transition process in food production and consumption, as well as in the new structure of the global food system that began forming in the middle of the 1980s.

3. Current European trends in the food production system and their implications for Slavonia and Vojvodina

The common characteristics of all participants in the food production system of Slavonia and Vojvodina are the insufficiency of responsibility, trust and consistency followed by excessive occupancy by the consequences of privatization and the intention for building a subsidized model of the food production system similarly to the EU. When it comes to European food production systems, food system participants in Slavonia and Vojvodina have ignored the fact that it valorizes particular natural resources and qualified work, and minimize the dependence on natural resources, improving simultaneously the quality of labor, production, products and life (Gellynk et al.; 2003; 104-105/Matthews; 2003, 53).

Following Adžić and Adžić (2011, 1710-1712), three key development trends in European food production systems can be identified.

First, technological progress will continue to have a crucial role in the transformation of the food production system in the next ten to fifteen years. The role of sophisticated mechanization in farm production, biotechnology and information technology will strengthen. A typical farm will grow and consolidate. Furthermore, it will intensify the connections with other parts of the food production system. At the same time, the role of labor will be weakening.

Second, demand for food will grow at a relatively slow pace, except in the case of significant climate disorders. Segmentation will be intensified while the trend of maintaining a healthy eating lifestyle will continue. This will have a significant and recognizable influence on the role and development of the capacity for production, storage and distribution, aiming to protect high-quality food, diabetic and organic food, in accordance with individualized possibilities and needs of final consumers.

Third, one should expect removing of market barriers to food within Europe. However, the question still remains whether the barriers in the rest of the world will be removed at all. Furthermore, the trend of reducing employment will be continued, primarily due to development and application of new technologies in food production processing, storage, transport and distribution.

Besides these trends, two groups of challenges will additionally influence the food production system in Slavonia and Vojvodina. The first is related to searching for new organizational and technological solutions for: (a) better valorization of basic resources (land, labor and primarily mechanization) considering the former pre-transition maximum, (b) land degradation, depletion of resources and environmental pollution, and (c) larger investment into the protection from any food contamination and keeping food in proper conditions for transport and distribution to the markets. The second considers opportunities opened by the accession to the EU for increasing exports of food, especially those that meet the requirements for exclusivity, naturalness, diet and health. Such requirements were relatively neglected, although it is unambiguous that they can be met in Slavonia and Vojvodina.

The aforementioned challenges influencing the food production system transition may be addressed in different ways, starting from incremental improvements of the existing organizations, businesses and technologies to development and implementation of new, highly sophisticated organizations, production and technological solutions. Usually, a transition of this system is governed by joint activities of individual participants, associations and clusters, international enterprises, as well as organized activities of national, regional, sub-regional and local administrations.

To sum up, the main implication of transition trends and challenges in European food production systems can be stated as follows: there are so many dangers originating from the European environment and threatening growth in food production and exports in Slavonia and Vojvodina, but at the same time, there are at least as many opportunities for increasing high value-added production and exports. Efficient use of resources, new methods for production and management introduction, and more stable participation in the European food market are very important for developing the food production system in Slavonia and Vojvodina above the minimum stated by the necessity of surveillance.

4. The choice of the basic methodological approach

Obviously, the food production system transition in Slavonia and Vojvodina may be reduced to the process of global commercialization on the basis of dynamic creation and development of economically self-sustaining agricultural holdings (primarily, commercial family farms) and large and diverse groups of market and non-market organizations and institutions. They should together create and promote a relatively stable and favorable business environment for the food value chain.

Therefore, framing the strategic framework for a successful transition of the food production system in Slavonia and Vojvodina should be considered as a complex interplay of mutual dependent and cross-cutting economic, technological, ecological, political and social activities. The basic condition for a successful transition is that all participants in the food production system develop the following: (1) macro, mezzo and micro organizational structures and management systems capable of efficient and competitive production, processing, storage, transport and distribution of food that will meet individual requirements regarding quality, prices and availability within the growing and unequal international competition, (2) appropriate physical resources and labor force, (3) a healthy financial structure, and (4) flexibility that enables fast and efficient reaction to the changing conditions in the domestic and foreign socio-economic and ecological environment.

In order to better understand the choice of the methodological approach, the way of solving this problem in the past is briefly described below. In Slavonia and Vojvodina, in the early 1960s, the process of building large business systems called “kombinat” started by a political decree. In the middle of the 1970s, again by a political decision, these systems were partially disaggregated, firstly by transferring financial power to subordinate business units, and then by delegating the business decision making process to them. From our current point, these systems can be defined as clusters led by natural resources. In the period of the post-socialist transition, these “clusters” vanished. The main causes for this should be linked to the fact that they lost their developmental functions even in the early 1980s. However, in the past two decades, practically nothing was done to replace them.

The current structure of the food production system in Slavonia and Vojvodina consists mainly of numerous micro, small and medium-sized agricultural holdings and enterprises that emerged on the ruins of the inherited organization structure and production capital (Kovacs, 2011, 412-414). In order to overcome develop-

ment entropy, Adžić and Birovljev (2011, 921) suggest that each participant of the (regional) food production system should be integrated into one complex hierarchy structure consisting of five levels.

The first (basic) level should comprise economically self-sustained agricultural holdings. They have to do a business in a wisely created institutional framework. The basic task of this level is to initiate and support the building process of global competitive primary agricultural producers through the complex package consisting of public goods and services of public administration.

The second level should include all food production participants that should be unified in business networks and alliances, as well as in export-oriented macro clusters organized according to the basic production lines. This level should maintain economically and technologically efficient and effective food businesses under the condition of global competitiveness and other rigidities introduced by the protectionist-oriented agricultural policy of developed economies.

The third level should include all relevant participants that should be unified in macro-productive segments. They should subordinate an optimal regional or national food organization and production as well as physical inputs (energy, basic raw inputs, intermediary products, machines and equipment) and services (business service, transport, storage and cross-border transfer) according to the best economic and technical conditions. Inclusion of big (agro) trade companies will have a significant importance no matter whether it is about the supply of inputs, or marketing, storage, transport, cross-border transfer on the target segments of the foreign markets.

The fourth level should include individual participants of the food production system within the institutional framework of regional or national socio-economic environment. Having in mind broader socio-economic goals, its task is to maintain a sustainable supply of human and financial capital, public goods, and public administration services, simultaneously creating friendly and simulative influences on behavior of the food production system.

The fifth level should include specific food production participants connected with the European and global food market. Its task is to enable realization of the economy of scale, to stimulate the production that met the necessary international level of effectiveness and competitiveness with regards to prices and quality as well as to motivate use of more newly-created than inherited resources.

For the above described food production system structure to be suitable for a successful food system transition in Slavonia and Vojvodina, one should bear in mind that the system is part of a broader regional and national system and even the European and global system, as well as that each of its parts reflects the position of the particular participant. This position is included, directly or indirectly, in the food production system and creation of (European, national, regional, sub-regional and local) economic, agricultural, technological, industrial, educational, rural and social policies. However, pace and development trajectories of a successful transition of the regional food production system are more dependent on domestic factors than on the international environment.

5. A new food production system and barriers for its implementation

A solution for creating the framework for a successful transition for the food production system in Slavonia and Vojvodina should lie in the set of mechanisms for inducement and coordination of structural changes in technological, organizational and financial performances of all participants. Related to this, a favorable business environment for development and employment of economic, technological and human potentials and a more efficient allocation of production factors is also important.

Taking into consideration the main determinants of the future progress of Slavonia and Baranja, reindustrialization of food production by clustering the human capital, productive entrepreneurship, innovations, private investment and exports, appears to be a vital part of the solution. The basics for the joint action of all food system participants are making higher value-added products and an increase in food exports. This requires a mix of institutional reforms and policies. This mix should be a function of the following: (1) development of a favorable business environment for exports and private investment, (2) improvement of all organizational forms, especially in the domain of export-oriented clusters, business networks and alliances as well as in the sector of production of public goods and services for the needs of (regional) food production, (3) creation of the conditions for more beneficial participation and maintenance of consensus between economic and social partners in the food value chain, and (4) transparent professionalization and decentralization of the functions in public regulation of the food production system.

The science, at least in its mainstream, cannot develop all methods and mechanisms required for successful solutions of all issues related to operationalization of

the suggested conceptualized transition system for food production in Slavonia and Vojvodina. Therefore, the essential questions related to formulation and implementation of a strategy for building the food production system are partially the result of interactions between the individual and group entrepreneurial and managerial initiatives. They should not be left to political voluntarism (no matter at which administrative level). For the solution to this problem, greater emphasis should be placed to accumulation and using of the following: (1) specific knowledge and skills, (2) capabilities for understanding the issues and managing them in complex and uncertain circumstances, and (3) specific abilities for creating solutions and persistence in their realization (Adžić & Birovljev; 2011, 925).

There are two additional challenges related to the development of a new food production model in Slavonia and Vojvodina. The first one arises from the fact that the main task of the frame for a successful transition of the food production system is creation of a friendly and fair environment for a sustainable increase in competitiveness and innovativeness. The transition demands not only investment in new organizations or new equipment, but also the people with new knowledge and skills, i.e. creative and innovative talents who will know how to create new resources and organize them in a way so they would be competitive in the European and global food markets. Consequently, a large number of productive entrepreneurs with broad and specific knowledge and skills is needed. However, unproductive entrepreneurship is growing dramatically in Slavonia and Vojvodina.

The second one can be found in the domain of the innovation system. At first sight, the current situation in the innovation system for food production in Slavonia and Vojvodina (taking into consideration, for example, the number and structure of the organization for education, research and development, available space and the number of experimental farms) is respectable in many aspects. However, institutional arrangements supporting this system are far from being able to protect and strengthen its modernization role. Many reasons contribute to that. For example, arrangements are inconsistent, nontransparent, uncoordinated and short-run oriented. Or, for example, reforms are more declarative and exist in name only. In this context, a regional innovation system in Slavonia and Vojvodina aiming to change the food production system and keep it competitive, innovative and transparent, does not exist.

5. Concluding remarks

Since the beginning of the free market transition process at the end of 1980s, Slavonia and Vojvodina have been facing the challenge of developing a new food production system that should be compatible with their inherited natural resources and new ones created by strategic decisions of agro-food authorities. However, they failed to create it. They neither developed a modern food market, business and institutional system, nor the desired effectiveness in doing commercial or public activities related to food.

In the last two decades, a critical mass of productive food entrepreneurs, capable to face current and forthcoming challenges, has not been reached, and a favorable institutional framework has not been created. Hence, one should conclude that the desirable framework for the successful food system transition cannot be created in the next few years. However, ambitious (but achievable) goals in the domain of high value-added food export on the macro, mezzo and business level, and the innovative ways for their achievement should be set by cooperative associations and networks consisting of entrepreneurs and managers, national, regional and local government, education system, and R&D system. Within this context, innovative ways for creating these conditions should be based on autopoiesis and co-opetition principles. The crucial precondition is that all participants should be focused on achieving desired results in ways that benefit a variety of interests.

References:

- Adžić, S. & Adžić, J. (2011). The Development Strategy of Agro-food Industry and Innovation System – The Case Study of Vojvodina, *Proceeding of the 2011 International Conference on Organizational Innovation*, Shieh, Ch-J. et al. (eds.), pp. 1708-1723, ISBN 978-986-85682-5-9, Bangi (Malezija), July 27-29. 2011, International Association of Organizational Innovation, USA, University Kebangsaan Malaysia, Center of Entrepreneurship and SMEs Development (UKM-CESMED) & Faculty of Economics and Management, UKM Chang Jung Christian University, Department on International Business, Taiwan, Jasmine Publications, Taiwan.
- Adžić, S. & Birovljev, J. (2011). The Strategic Framework for Sustainable Development of Agro-Food industry – The Case Study of Vojvodina, *TTEM (Technics, Technologies, Education, Management)* Vol. 6. No 4, 916-929, ISSN 1840-1503.
- Croatian Bureau of Statistics (2113), First release, 12.1.2. from February 14.

Gellynk, X., Verbeke, W. & Viaene, J. (2003). Food processing, Collection of works: Industries in Europe: Competition, Trend and Policy Issues, Johnson, P (ed.), ISBN 1 84064 709 4, pp. 85-110, Edward Elgar.

Kiš, T. & Cileg, M. (2011). Reindustrialization Problems of Regions of Economies in Transition: Case of Vojvodina, ABSR Journal, Vol. 2, No 2, pp. 155-168.

Kovacz, T (2011). Agriculture in Balkan, Collection of works: Regional Transformation Processe in the Western Balkan Countries, Horvath, G. & Hajdu, Z. (eds.), ISBN 978 963 9899 37 7, pp. 400-426, Centre for Regional Studies of the Hungarian Academy of Sciences, Pecs.

Matthews, A. (2003). Agriculture, Collection of works: Industries in Europe: Competition, Trend and Policy Issues, Johnson, P (ed.), ISBN 1 84064 709 4, pp. 26-64, Edward Elgar.