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INNOVATION POLICY IN AGRICULTURE AND RURAL DEVELOPMENT OF THE EUROPEAN UNION: PROSPECTS FOR THE REPUBLIC OF MOLDOVA

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Abstract

The future of the rural world has been the subject of much research in Europe and a large number of reports have been written on this subject. For the European Union, which aims to support rural development, it is essential to precisely define what a rural area is and even distinguish several different types of rural area. Rural areas are facing major challenges today which arise mainly from globalization, demographic change and the rural migration of young, well-trained people. Policies for rural areas aim to contribute to recognizing and making use of strengths and opportunities. Innovations have a direct influence on the level of welfare and satisfaction of each rural citizen and whole society. EU policies concerning innovations are aimed at transforming the European Union into a leading economy based on knowledge.

Key words: *agricultural innovations, rural economy, sustainable development*

INTRODUCTION

Agriculture continues to play an important role in rural areas, and in some regions it also contributes to economic growth. Small and medium-sized companies are certainly of even greater relevance, but many of them are again closely linked with agriculture in both upstream and downstream processes.
In the member states of the European Union, over 90% of the agro-food production and processing is still done in a conventional (industrial) way. The European Commission, recognizing the social and environmental dysfunction of this solution (confirmed in the Eurostat research) promotes organic farming and the so-called integrated agriculture (modern extensive agriculture). It is this second model, more strongly linked to innovation and to some extent – at least in terms of applying innovative solutions – similar to the idea of "precision agriculture", ultimately, can and should become a dominant in the integrated Europe.

MATERIALS AND METHODS

For revealing the problem scientific literature was used, Global Innovation Index and EU official data, the National Bureau of Statistics of the Republic of Moldova data and data derived from research conducted by author. Based on accumulated data calculations were performed for analysis of the main directions of European innovation policy to support agricultural development. For data interpretation collected and calculations made analytical method was applied, calculation was made with tabular method and graphical method.

RESULTS AND DISCUSSIONS

In order to counter the negative trends of development, heightened by the world financial crisis of 2007, the European Commission at the beginning of 2010 proposed for the member countries of the European Union to adopt the Program Europe 2020, which inherently is a vision of a modern, social market economy in the 21st century. The new development strategy has a chance to provide a fast and stable social and economic development in Europe with high rates of employment, including building a modern, innovative and globally competitive European economy. Putting its essence

briefly, it should be emphasized that the Program Europe 2020 includes three interrelated priorities:

Fig. 1. Main directions of the European program "Europe 2020"[1]

The European Commission proposed in this document the demarcation of several superior, measurable objectives of the EU to ensure the implementation of the following priorities [1]:
-the employment rate of people aged 20–64 age group should be 75%,
-on investment in research and development (R&D) it is appropriate to devote 3% of GDP of the Union,
-to achieve the objectives of the climatic-energy package – '20/20/20' (including the optional limit of carbon dioxide emissions by up to 30%),
-the number of those leaving school early should be limited to 10% and at least 40% of the people of the younger generation should earn higher education,
-number of people at risk of poverty must be reduced by 20 million.
In the opinion of the European Commission, with which do not necessarily agree all the EU member countries, the social, economic and territorial cohesion policy can effectively contribute to solving the major problems lying at the sources of the poor performance of the European Union in the field of innovation.
The Commission is publishing today a study analyzing the value of the EU name protection scheme for all food and agricultural products ("geographic indications" or "GIS"), including wines and spirits. [2]
60% of sales of European GI products took place in the country where these products originate, while 20% took place in other EU countries and a further 20% were exported outside of the EU. Extra-EU exports represented some €11.5 billion, mainly destined to the US (30%), Switzerland and Singapore (7% each), Canada, China, Japan and Hong-Kong (6% each). [6]
Over the period 2005-2011, wines accounted for 56% of all sales of food and agricultural products with a protected name produced in the European Union (€30.4 billion), agricultural products and foodstuffs for 29% (€15.8 billion), spirit drinks for 15% (€8.1 billion) and aromatized wines for 0.1% (€31.3 million).
As the European Commission underlines, the independent evaluations show that this policy had had previously a significant and generally positive macroeconomic impact, particularly in the less developed regions, with multiplier effect for the EU as a whole.

Table 1. Rural development in the EU – examples of actions to improve innovation in the European countryside

Austria *The diversification of production – processing flax fiber*	The received aid for the cultivation, harvesting and processing of fiber for the manufacture of thermal and sound insulation plates.
Denmark *Competitiveness – the investment in the quality of the dairy production*	The received aid for a dairy cooperative helped to modernize buildings, provide new devices and improve the quality control and the working environment.
France *The diversification of farms – ecologic cultivation of aromatic and medicinal plants*	The study work and investment aid allowed the creation of specialized agricultural holding with the cultivation of plants, processing and marketing and educational activities.
Germany *The diversification of farms and local services – creating a home for children*	The received aid for the conversion of barns into the house, providing social services, as well as creating alternative agricultural company.
The Netherlands *The countryside renewal and diversification of rural area – bakery*	The aid for the restoration of buildings and the creation of local bakeries: additional employment for the local population and improvement of amenities of life in the countryside.

In the opinion of the Commission, by mobilizing the existing growth potential in all

regions, the cohesion policy influences the more balanced economic growth in geographical terms and the increase in the growth potential of the Union. [5]

If the European Union in the next decade is to achieve the ambitious objectives of the Program Europe 2020 [2], all its regions must contribute to it, and in particular those that have a higher potential for productivity growth and employment.

The following EU schemes encourage diverse agricultural production, protect product names from misuse and imitation and help consumers by giving them information concerning the specific character of the products [3]:

PDO **-** covers agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using recognized know-how.

PGI **-** covers agricultural products and foodstuffs closely linked to the geographical area. At least one of the stages of production, processing or preparation takes place in the area.

TSG **-** highlights traditional character, either in the composition or means of production

Moreover – according to the Commission – this policy contributes to the strengthening of the economic and political integration, e.g. through the development of infrastructure network, improving the access to services of public interest, raising the level of professional skills in the Union population, increasing the accessibility of outermost regions (peripheral) and supporting of cooperation.

An integral part of the European program of development for 2014 - 2020 years is the close cooperation with neighboring countries in the field of agricultural production and innovation.

The agro-food sector plays a crucial role in Moldova, accounting in 2011 for 52 percent of total exports and 32 percent of exports to the EU, while the food processing industry ensures around 40 percent of country's total industrial production. [4] Besides its economic role, the sector has a central social function, especially in rural areas having limited economic opportunities and more difficult living conditions: more than half of the rural population is employed in agriculture, which reveals its fundamental importance for human development of the country. Due to its numerous social and economic ramifications and the possible negative competitive shocks on some local producers, farmers and workers, the liberalization of agricultural imports should be scheduled to take place over a longer period of time than in other sectors and even other countries, so that the producers will have more time to adjust and enhance their competitiveness.

Low productivity and poor competitiveness on the European market magnify the economic and social vulnerability of the Moldovan agriculture. Despite the fact that its share in total employment is about 27.5 percent, the agricultural sector accounts for only around 12 percent of GDP. [4]

Table 2. Competitiveness of the Moldovan agro-food Products on the EU market, RCA indexes in figures, year 2011

Products with competitive advantages		Products with competitive disadvantages	
Sunflower seeds	37.4	Cigarettes containing tobacco	0.9
Sunflower seed oil	10.5	Other food preparations containing cocoa	0.7
Edible nuts fresh, dried	8.0	Bread, pastry, cakes, biscuits and other bakers	0.5
Juices, other than citrus	5.3	Sugar confectionery (+ white chocolate)	0.5
Fruits, fresh, dried	4.8	Butter and other fats and oils derived from milk	0.3
Maize seed	4.2	Waters	0.3
Rape, colza, mustard seeds	3.3	Synthetic rubber	0.3
Molasses	3.0	Bulbs, cuttings, live plant	0.3
Grapes, fresh or dried	2.9	Food preparations containing cocoa	0.2
Bovine, equine hides, skin	1.6	Seeds, etc., for sowing	0.2
		Milk concentrated of sweetened	0.1

Surprisingly, most of the agro-food products for which Moldovan firms are least competitive in comparison with European ones have a relatively high processing level (butter, pastry, cakes, biscuits, food preparations, sugar confectionery). This may pinpoint to the problems related to scarce

capital, limited domestic production capacities and know-how, as well as poor compliance with international quality standards.

Nevertheless, it is important to bear in mind that not all agro-food products lack competitiveness. Moldovan agro-food products with high revealed comparative advantages are exported at a lower processing stage, serving in many cases as raw materials at the lower end of the production chains (e.g. maize seed, grapes, fruits, bovine skin). [6]

Two important agro-food sectors are worth pointing out as they have significant unexplored potential: animal products and honey. Currently, Moldovan animal products are banned on the European markets, while honey products have been banned until 2012, due to non-compliance with sanitary and phytosanitary standards. However, once the domestic quality system are upgraded and the standards – adjusted, these products are most likely to display much higher revealed comparative advantage on the European market. This is going to be a costly and time consuming process, requiring consolidated efforts and frank commitment from Moldovan policy makers.

Moldovan farmers should therefore acquire a good understanding of the production models of their peers in these countries in order to adopt the most competitive production and marketing strategies.

The markets where Moldova will meet the fiercest competition are in wheat, barley, fresh fruits, jams, fruit jellies, marmalades, fruit or nut pastes, juices, spirits, skin of bovine, rape, colza and mustard seeds. Besides EU countries, Moldovan producers will face strong competition from several non-EU states: Ukraine, Turkey, China, USA, Australia, South Africa and New Zealand. Additionally, exporters of wines of fresh grapes, which are considered strategic for Moldova, compete with Bulgaria, France, Italy, Luxembourg, Portugal, Spain, Australia, Chile and South Africa. [5] Besides the fact that it squeezes the profit margins, such a tough competition on the European market serves as a strong entering barrier for small producers due to financial and technological constraints and higher unit costs.

Since price is one of the crucial components of export competitiveness, it is worth comparing the export prices of the Moldovan producers with that of the main foreign exporters to the European market. For most of the top-10 exported items, Moldovan export prices are lower in comparison with their European competitors. However, this does not necessarily mean that Moldovan exports are more competitive. Some of them indeed may benefit of lower production costs, given the cheaper domestic labor force and other inputs. At the same time, smaller prices may reveal lower quality of these products in comparison with their European counterparts. Additionally, in some cases, this might be the result of the marketing strategies of Moldovan firms aimed at stabilizing their segments on the European market.

Table 3. Comparison of main Moldovan agro-food products exported to EU, year 2011

Commodity	Share in total agro-food exports, %	Main export destinations, % of total
Fresh and dried nuts	22.10	France (49.4), Greece (17.8), Austria (10.1)
Sunflower seed oil	12.60	Romania (83.5)
Sunflower seeds	11.10	UK (39.3), Romania (14.5)
Wine of fresh grapes	7.80	Poland (42.7), Czech Rep. (22.1), Romania (10.1)
Other wheat and muslin	7.00	Romania (31,8), UK (18,7)
Barley, unmilled	6.10	Romania (54.2)
Fruit juices	5.90	Germany (37.8), Poland (28.3), Austria (24.7)
Rape, colza and mustard seeds	3.80	UK (63,8)
Maize, other	3.10	Italy (37,3), Greece (29.5)
Dried fruit	1.70	Austria (43.7), Greece (19.5)

Table 3 reveals important changes in the structure of main items exported to the EU-27 in recent years. One can notice the decrease in wines share from 19.7 percent in 2006 to 7.8

percent in 2011, owing to Romania's accession to EU in 2007, as well as to the rather modest sector performance over these years. [7] This is also the result of too many domestic structural and institutional barriers hampering the competitiveness of wine producers, as well as the intense competition on the European market, making the diversification of exports away from Eastern markets a challenging task.

However, the competition that Moldovan producers face on the European market is by far more intense with firms from the non-EU countries. [4] For instance, Chinese exporters have a price advantage in exporting apple juice to the EU markets; US export prices are lower for walnuts, as well as for hides and skins of cattle; Ukraine has an advantage in producing refined sunflower seed or safflower oil and has the same prices as Moldovan producers for crude sunflower seed or safflower oil, wheat and rape or colza seeds.

The trade liberalization for the agro-food sector may bring both benefits and costs. In order to maximize the former and minimize the latter, the Government has to switch its policy priorities from protecting the domestic producers to enhancing their competitiveness through a better investment climate and higher compliance with EU standards. Additionally, a number of sub-sectors exist for which the trade liberalization should be much smoother in order to prevent eventual job cuts and foreclosures as a result of stronger competition with the European exporters.

From the economic side, the Moldovan agricultural sector is mostly represented by micro-enterprises which face low competitiveness and productivity; from the social point of view, there are no viable alternatives for raising revenues in rural areas, except for agriculture, which exposes hundreds of thousands of people to a significant poverty risk.

CONCLUSIONS

The agricultural and rural policy of the EU in order to ensure an increase in its productivity in relation with the activities for the improvement of its quality and the protection of the ecosystem will require, which gives little doubts, significant subsidies also in the new financial perspective for the European Union for the years 2014–2020. A similar assertion concerns the cohesion policy resources used for the modernization and rural development of the European countryside. The realization of the ambitious objectives of the Program Europe 2020 cannot and should not therefore be held at the expense of reducing the expenditure on the agricultural and cohesion funds, because its main objectives related to innovation can be successfully implemented in agriculture and in rural areas in Europe. So the relationship between the realizations of the ambitious objectives of the Program "Europe 2020" first exists, and second it is of bilateral nature. Indeed, it is difficult to imagine a vision of a modern European economy based on knowledge without taking into account the living and working conditions of millions of people employed in agriculture, agro-food processing industry or other professions of the countryside. Their proper development could in turn significantly affect the growth of aggregate GDP of the Communities.

To harness the development potential of the deeper economic links with the EU, while reducing the related risks, the Moldovan Government and businesses have to consider a number of actions:

-Despite the large amount of financial and technical resources, as well as time necessary to make the agro-food sector to align its international SPS standards, policy makers should consider as immediate priorities the adjustments of the quality standards for fruits and vegetables, which are among the most economically and socially important sectors. Introducing SPS in these sectors should not be financially very difficult, as standards are not very demanding

-Moldovan trade policy should concentrate on enhancing the competitiveness of Moldovan agro-food producers, rather than protecting domestic markets through tariff barriers under an indefinitely long time-horizon. Bringing

the domestic standards in line with the international ones and enforcing the domestic quality infrastructure are the key actions necessary for tapping the export potential of Moldova's agro-food sector. This is particularly related to SPS standards for meat products, dairy and live animals that are currently banned on the European market. As this is mainly related to low investments in the agro-food sector, increasing the investment attractiveness of these sectors should be a key policy objective.

-On a more technical, but still important aspect, it is necessary to relax the requirements for meeting the criteria of rules of origin for the EU market, which would have a significant contribution to the exploration of industrial sector's export potential. This issue becomes even more crucial given the high importance of re-exports for the sector, especially for clothing and clothing accessories - the most important exported product category to EU. Therefore, it is necessary for Moldova to adhere to the Pan-Euro-Med cumulating of origin system, which could ease the access of Moldovan producers on the European market.

-In the case of agricultural goods, Moldova can accept quite short transition periods of up to 3 years for such products like cereals, hides, skins, furs, oilseed, and oleaginous fruits. The longest transition periods (around 10 years) are advisable for some agro-food products, including butter, pastry, cakes, biscuits, food preparations and sugar confectionery. And there is a group of in-between products, which are quite competitively produced by Moldova but at the same time are going to meet equally competitive products originating from the EU, including wine, spirits, vegetable preparations, tobacco products, jams and other products. For these products, a transition period towards full trade liberalization should be shorter than for those with comparative disadvantages, but longer than for products with comparative advantages and target the interval of 4-7 years.

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