EVOLUTION OF AGRICULTURAL ACTIVITY IN THE EUROPEAN UNION

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Abstract

In the European Union, activity in the field of agriculture, forestry and fishing is an important one. This is because a significant number of countries, if not all, have geographical and climatic conditions favorable to agricultural, forestry and fishing activities. The authors followed this article to present the concrete situation in the European Union in this field, trying to highlight the state of evolution in this field and especially to suggest elements of the European Union program that aim and aim to reduce the disappearance of the causes which in some countries Agriculture in its totally inefficient. At the level of the European Union's budget, significant funds are made available to support the effort to protect the forest fund and to efficiently and rationally operate the fish stocks. 13 of the European Union countries have special conditions for the development of agricultural activity in its entirety. The way in which European Union member states have been able to harmonize their efforts to increase agricultural, forestry and fishery production. Further on in this article, the authors focus on presenting the evolution of the structure of agricultural farms, a key element that can bring significant revenues to individual Member States and in a harmonized manner to the European Union. Further attention is paid to agricultural production, studying the main crops, from cereals to potato culture, sunflower and sunflower, which provides a significant production within the European Union.

Keywords: *agricultural production, agricultural farm, potential, cereal production, evolution*

JEL Classification: *J43, Q14*

Introduction

This article is a concrete way of analyzing the results of the EU Member States, on the one hand, and on the whole of the European Union. The article is a concrete analysis based on the data provided by Eurostat, which have been analyzed and interpreted according to the sector to which we refer. The

article in the background is structured from several points of view on several important issues. A first structure is based on the fact that the authors analyze the agricultural, forestry and fisheries potential of the member countries, then presents the measures in the plan that the European Union is considering, then suggests the results obtained and prefigures the measures that should be taken in the coming period. It is revealed that the funds allocated to the subsidies or aids in order to ensure the increase of the agricultural production have resulted in better results, have improved the agri-food market of the European Union, have stabilized agro-food prices and have made an essential contribution to raising the level Living conditions of the rural population and not only in every member country of the European Union. In other respects, the effect of the subsidies and aid granted is highlighted, the analysis leading to the conclusion that there are still special resources to be better exploited in order to further improve agricultural production in the Member States of the European Union and in total on the Union market European. They are presented graphically, how the cereal production, agro-technical production increased, and a particular aspect in this paper and the presentation of the increase in gross value added in the agricultural sector. Structurally then by the fields of activity in the general agricultural field, the structure of the agricultural farms, the increase of the agricultural production is analyzed one at a time, which refers to the production of special productions in the field of cereal production, then in the production of sugar beet, potatoes, Rapeseed, sunflower oil, and many more, showing that there is enough scope for further growth. The emphasis is then on the increase of livestock production, as well as the results of the main products of milk, butter, cheese, beef, pig and especially the production of products derived from these industries.

Literature review

Newbold, Karlson and Thorne (2010) focus on the use of statistics in economic analyses. Strand (2017) approaches the characteristics of the rainforest from the viewpoint of risks associated with the respective system and outlines the correspondence between the marginal value of the rainforest and the risks associated, for example, with the fragmentation of the eco-system. Hansen et.al. (2013) have used satellite-generated data on the losses and gains in terms of forest surface, for a 13 years interval. Their study presents the most significant losses per country, the negative impact of forestry in some areas, the main causes of losses within the boreal region. Anghelache (2008) is a reference work in the field of statistics, the author approaches the relevant indicators applied in measurement of agriculture potential and outputs. Also, the collection of books of the author (Anghelache, 2007-2016)

provides a detailed description, across the respective years, of the Romanian agriculture, from the economic point of view. Bălăceanu and Apostol (2012) develop on the sustainability of Romania's agriculture, a key finding is the set of factors that can improve this complex and important activity, the perennial production instruments, specialization of labor force and capitalization of relevant research results and technical improvements. De Groot et.al. (2012) have evaluated the large size of ecosystem services' value, considering the cases of open ocean and reefs, they state that this value is not considered as an actual tradable benefit. Harrison, McLaren and McMillan (2011) consider that trade is viewed as a less than primary factor for inequality in the recent period, even if trade has impact on other phenomena that are sources of inequality. Quamrul and Michalopoulos (2015) appreciate that climatic volatility has influenced the adoption of agriculture by early human communities. El Shazly, Anghelache, Mitruţ and Ţiţan (2008) have realized a complex study of the agricultural market, with emphasis on the main components of this branch. Jorgenson and Slesnick (2008) have developed an econometric model for the study of aggregate labor supply and demand in the US's economy, they offer evidence and explanations on the two labor market indicators. Bowen, Chen and Eraslan (2014) analyze the impact of mandatory spending on efficiency, and model this type of expenses from the viewpoint of their legal enforcement. Yared (2010) presents some interesting findings on the citizen's behavior towards different types of taxation policies under various types of economic environments. Angelsen (2010) presents the impact of policies dedicated to reduce deforestation on the agricultural results. Sponte (Pișțalu) (2015) discusses on the main issues that affect the development of Romanian agriculture, Neţoiu et al. (2013) develop on a close topic, emphasizing the regulatory and financial dimensions of the agriculture transformations. Rabonţu (2013) has presented a detailed analysis on the same topic, his system of indicators and datasets used provide valuable results. Riboni and Ruge-Murcia (2008) contribute to the understanding of some characteristics of the distribution of actual interest rate changes. Dachin (2011) presents the role of Romanian agriculture in the national economic evolutions, considering three dimensions: the GDP, the prices and the corresponding labor market segment. Greenwood, Sanchez and Wang (2013) have developed a complex model that explains the effect of financial development on economic development.

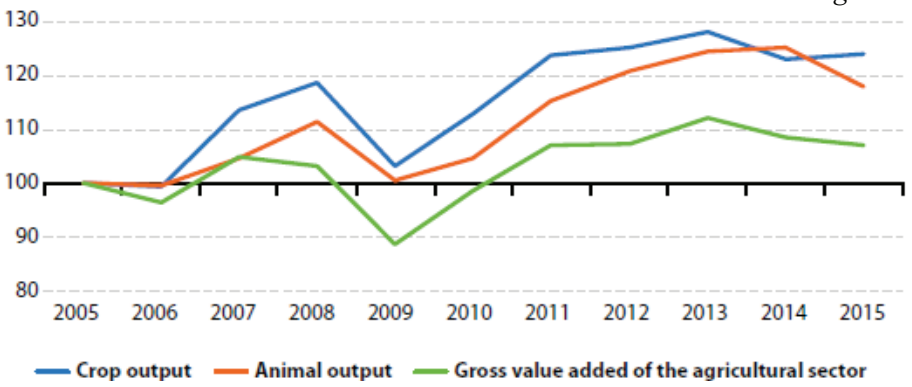
Research methodology and data

In the European Union, the evolution of each country's economy is determined by the potential of resources available to that country. Of course, agriculture is one of the first sectors of the economy in which, according to

Article 39 of the Treaty of Rome of the European Economic Community (1957), it is stipulated that a common or Community agricultural policy must be promoted. This Community agricultural policy was focused on increasing labor productivity in agriculture, ensuring a standard of living for the rural community, strengthening the market and stabilizing prices. This first objective was to produce food, develop the European Union market and, in particular, to efficiently capitalize on existing agricultural land in each EU Member State and, at the same time, in all member countries. In the forestry field, it has been set as an objective to continue forest development, to create a biodiversity that will ensure and have an impact on climate change. The European Commission has made many proposals that were first adopted in 2013, which came into force on 1 January 2014, which set out a series of measures to ensure the forestry consolidation of all countries and, in particular, to create a positive Long-term fisheries. The European Union's programs aimed to reduce to a maximum the measures for the inappropriate use of forestry resources and especially of fishery resources. In the European Union, additional attention has been paid to increasing agricultural production to achieve a lower price index on the agri-food market. Since 2013, the European Union has allocated € 220.2bn to subsidies or aids to increase agricultural production, improve the agri-food market and stabilize prices for agri-food products, which have a decisive contribution to Raising the living standards of the rural population and not only. The same policy of raising and subsidizing production also referred to the livestock sector, increasing each year the subsidies granted to producers in this field. Of course, allocations from the Community budget are reasonable, considered as an effort to support rural economic growth in the area that brings satisfaction and prospect of raising the standard of living of the population. As a result of the measures taken in the European Union, the relative increase in 2009, when it was 133.9 billion euros gross value added at agricultural year prices, in four consecutive years this increase was in 2013 of 170.7 billion euros, An increase of 3.2%, in 2014 a slightly lower 166.4 billion euros and somewhat lower than 161.1 billion euros. In the following graph we present the elements regarding the increase of the agricultural production, the increase of the animal production and the gross added value in the agricultural sector.

Agricultural output and gross value added at basic prices, EU-28, 2005–15 (2005 = 100)

Figure 1

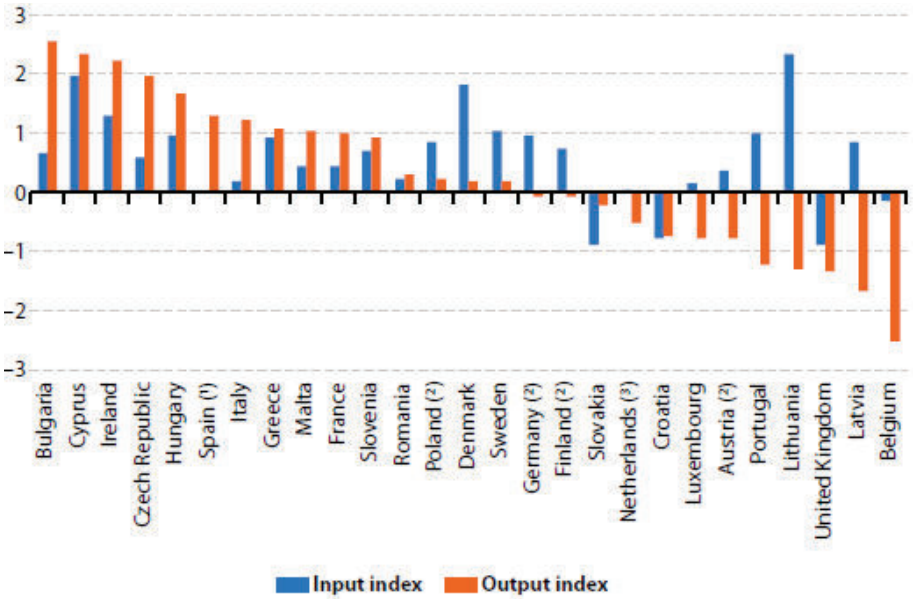


Source: Eurostat - Key figures on Europe 2016, pag. 111

The problem is that the Member States of the European Union do not abandon the subsidy program and support the increase in agricultural production. 13 of the 26 EU Member States with special agricultural conditions managed to obtain reasonable, deflated prices that would provide a surplus in terms of increasing agricultural output and its effect on the standard of living of the population. There are countries such as Italy, the Czech Republic, Bulgaria, which have achieved positive results in this area, but also other countries that, although having a particularly high agricultural potential, include Romania, Poland and other southern countries, due to a poor organization of agriculture , Have not achieved results as a result of the efforts and subsidies granted. In figure no. 2 are presented changes in deflated prices in agriculture taking into account the agricultural input during 2010-2015.

Change in deflated price indices of agricultural input and output, 2010–15 (average annual rate of change, %)

Figure 2



Source: Eurostat - Key figures on Europe 2016, pag. 112

The study of this chart shows that Romania is at a very low level, both in terms of the price of agricultural products and input-output. There are also other countries like Slovenia, the Netherlands, Croatia, Luxembourg, Austria, Belgium, the United Kingdom who could not harmonize these two indicators and so the evolution was not very significant.

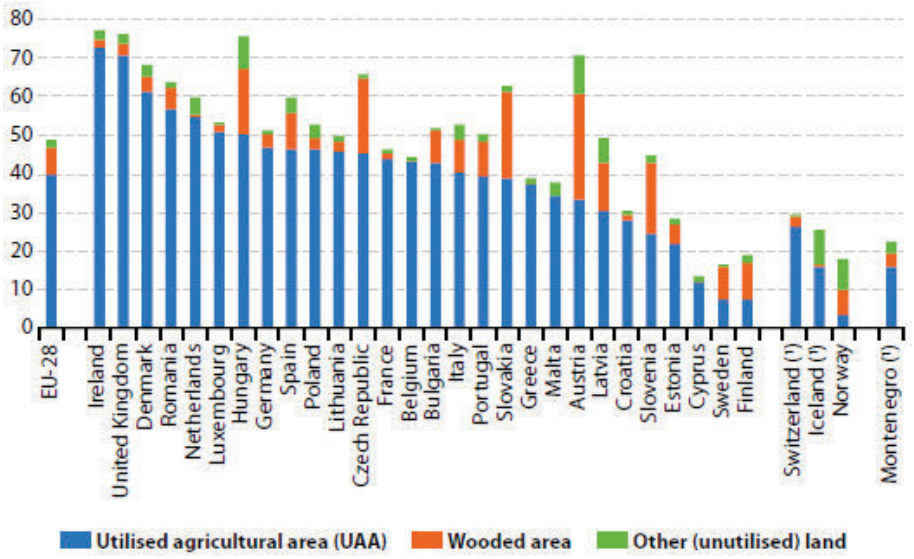
Structure of agricultural farms

Agriculture as a structure in the Member States of the European Union varies according to geological, topographical, climatic and natural conditions, as well as the result of the infrastructure activity carried out. In 2013 there were 10.3 million agricultural concentrations in the European Union. Analyzing this data, we find that about 6.5 million, approximately 63%, owned 175 million ha, almost 40% of the total agricultural area in the European Union. It also follows that, on average, an agricultural concentration was 16.1 ha. The total labor force in agriculture was 9.5 million workers per year in 2013, of which 8.6 million (92% of the total population employed in agriculture) were employed. On the European Union as a whole, the

labor force on agricultural farms in the period 2007-2013 was 2.3 million, equivalent to a yearly reduction of 19.8%. Agricultural production during this period increased as a result of the profitability of the activity as a result of the introduction of higher agrotechnical measures, which could increase the productivity of agricultural labor, improve the agro-technical means and be able to develop a more efficient agricultural economy. In figure no. 3 shows the agricultural areas existing or owned by those who focus the agricultural area in 2013. The data stops at this level.

Land belonging to agricultural holdings, 2013 (%)

Figure 3



Source: Eurostat - Key figures on Europe 2016, pag. 112

Three indicators are presented in this graph: the use of agricultural area, forestry area and other areas linked to agricultural and forestry activities. The data are significant and we find that Romania is one of the countries that is the highest, almost 60% of the agricultural area that can be used and capitalized. The study, graphical representation no. 3 shows all the developments that have taken place in the European Union. An interesting element is the analysis of the labor force in agriculture during the period 2007-2013. Unfortunately, the data for this activity is lower. We took into account in the years 2007, 2010 and 2013, which was the level of labor force in agriculture.

Labour force, during 2007–2013 period

Table 1

-1000 annual work units-

State	Year		
	2007	2010	2013
EU-28	11850	9946	9509
Belgium	66	62	57
Bulgaria	494	407	320
Czech Republic	137	108	105
Denmark	56	52	54
Germany	609	546	523
Estonia	32	25	22
Ireland	148	165	164
Greece	569	430	464
Spain	968	889	814
France	805	780	725
Croatia	189	184	175
Italy	1302	954	817
Cyprus	26	19	17
Latvia	105	85	82
Lithuania	180	147	145
Luxembourg	4	4	4
Hungary	403	423	434
Malta	4	5	4
Netherlands	165	162	153
Austria	163	114	111
Poland	2263	1897	1919
Portugal	338	363	323
Romania	2205	1610	1553
Slovenia	84	77	82
Slovakia	91	56	51
Finland	72	60	58
Sweden	65	57	59
United Kingdom	306	266	275

Source: Eurostat - Key figures on Europe 2016, pag. 114, processed by the authors

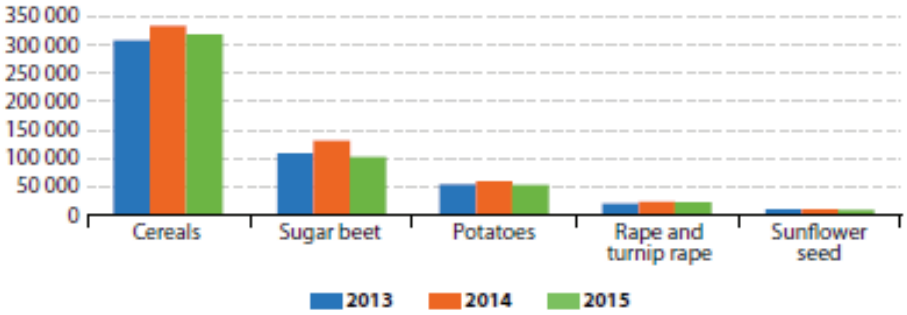
We will find that in a number of countries the labor force has decreased, as happened in Romania. This downward trend was determined by the improvement of agro-technical means used in agriculture, as well as the neglect of agricultural production. Interpretation of the data in this table gives meaningful relevance to the above.

Agricultural production

The agricultural activity is concretized by three indicators: the level of total production, the level of livestock production and the level of cereal or field production. In 2015 the European Union produced 317 million tonnes of cereals. However, this was a 5.7% lower than the average achieved over the last 5 years, ie 2010-2014. In the same year in the European Union, 101.9 million tonnes of sugar were produced, 2.6% less than in the previous year. And the production of other field, cereal or vegetable products was low, with a steady decline in agricultural output. In figure no. 4 shows the production data for the main products during 2013-2015.

Production of main agricultural crops, EU-28, 2013–15 (thousand tonnes)

Figure 4



Source: Eurostat - Key figures on Europe 2016, pag. 115

Data can be used to interpret and analyze how agricultural output evolved. From this perspective, we see that cereal production holds an important share, sugar production also ranked second, potato production in third place, rape and rapeseed-like products in fourth place, and sunflower seed in the last place. The data are presented for three years, 2013, 2014, 2015, where the data are suggestive in relation to the evolution of agricultural production. A comparative study of the EU Member States can be made using the data in Table no. 2, respectively livestock farming in 2015, showing milk,

butter, cheese, cattle, pig products, or products made by exploiting the sheep's potential.

Agricultural production related to animals, 2015 (thousand tonnes)

Table 2

State	Raw cows' milk delivered to dairies	Butter	Cheese	Meat from		
				bovines	pigs	sheep
EU-28	151588	1890	9525	7590	22958	724
Belgium	3988	32	101	268	1124	3
Bulgaria	488	1	77	5	61	:
Czech Republic	2482	25	123	68	228	0
Denmark	5278	45	391	121	1599	2
Germany	31879	456	1900	1124	5562	21
Estonia	720	5	43	1042	0	
Ireland	6585	187	207	564	276	58
Greece	603	1	188	42	90	55
Spain	6800	32	465	634	3896	117
France	25323	368	1950	1451	1968	81
Croatia	513	4	34	42	73	1
Italy	10500	95	1207	788	1486	34
Cyprus	173	0	23	5	43	3
Latvia	808	6	38	17	29	0
Lithuania	1438	14	101	44	66	0
Luxembourg	333	:	:	9	12	0
Hungary	1536	5	80	26	409	0
Malta	42	0	:	1	6	0
Netherlands	13331	:	845	383	1456	13
Austria	3103	32	185	229	528	7
Poland	10874	170	773	471	1906	1
Portugal	1935	32	73	89	377	11
Romania	919	11	82	44	330	9
Slovenia	554	:	15	34	20	0
Slovakia	865	7	36	8	45	1
Finland	2394	55	88	86	192	1
Sweden	2933	16	90	144	234	5
United Kingdom	15191	:	403	883	898	300

Source: Eurostat - Key figures on Europe 2016, pag. 116, processed by the authors

Conclusions

The authors' study reveals a number of theoretical and practical conclusions. First of all, the European Union, the 28 member countries - we are not talking about the Brexite - have an agricultural, forestry and piscicultural potential in many other areas of the world. The second conclusion is that the European Union is concerned about how the non-reimbursable funds are used to subsidize and help farmers in all Member States. The third conclusion is that Romania, due to its position and size, the 7th member of the European

Union, represents an agricultural, forestry and fishery potential quite important for the European Union. Therefore, in the program of measures for supporting agriculture in the European Union, Romania has obligations to align the standards of the other EU Member States, there are important non-reimbursable funds, and Romania expects to carry out European works of improvement The arable fund, the conservation of the forest fund and the rational exploitation of the fish stocks. The fourth conclusion is that in Romania there have been a series of errors, more or less anticipated, which led to a reduction of the agricultural crops, livestock, fish farming, which must be used to use A concrete program to re-evaluate and improve production in this area. We know, and this is another conclusion that in Romania, until the accession to the European Union, a series of works were neglected, activities aimed at the protection of the arable land, there were non-verbal deforestations, which have an effect on the environment And even of the climatic specificity of Romania.

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