

## ROMANIAN AGRICULTURE IN EUROPEAN CONTEXT

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### **Abstract**

*This paper presents the main features of Romanian agriculture, as part of the European agricultural sector. Based on statistical data, the article presents an analysis of the main problems that Romanian agricultural sector faces, such as fragmentation, preponderance of small and non-competitive farms, high employment but very low labour productivity, and modest crop and animal output.*

**Keywords:** *agriculture, employment in agriculture, labour productivity, agricultural output*

**JEL Classification:** *Q00, Q10*

### **Introduction**

Before 1990, the Romanian agriculture was structured according to principles of collective ownership and state management and planning. The transition to the market economy has imposed a series of challenges for the agricultural sector which have not been properly managed, so that they resulted in structural problems, such as fragmentation and small size of farms, and efficiency problems, as the productivity of the agricultural sector is very low, compared to the EU average.

The paper is structured in three sections which analyze the features of the Romanian agriculture compared to other countries in the European Union or to the European average. These sections focus on the structural features, employment and labour productivity in the agricultural sector and the agricultural output.

### **Structural analysis**

In Romania, the transition to the market economy was not properly managed and this has negatively influenced the agricultural sector. In the absence of a coherent strategy, the regulations and measures adopted have lead to a great fragmentation of land and farms.

As Table 1 shows, about 70% of the Romanian farms are very small (less than a hectare), and they hold one third of the agricultural land in Romania, consisting of gardens, pastures and hayfields, less productive soils. 27% of the total number of farms are subsistence and semi-subsistence farms, holding 21% of the agricultural land and producing for own consumption, while 1,5% are commercial family farms, which hold 10,2% of the agricultural land. Unlike developed European countries like Germany, in Romania the commercial family farms have the lowest representation and are marginalised by agrarian policies.

**Table 1 – Agrarian Structure of Romania, 2012**

Type of farm	Size (hectares)	Number (thousands)	% of total number	Surface (thousands hectares)	% of total surface
Small unfunded households	<1	2740	71,1	5073	34,5
Subsistence and semi-subsistence farms	1-10	1044	27,1	3108	21,2
Commercial family farms	10 - 50	60	1,5	1494	10,2
Companies	100 – 55000	12	0,3	5010	34,1
<b>Total</b>	-	<b>3856</b>	<b>100,0</b>	<b>14685</b>	<b>100,0</b>

Source: Otiman, 2012

In Romania, there are only 12.000 agricultural companies that exploit between 100 and 55.000 hectares of land, representing only 0,3% of the total number of farms. These companies hold together 34% of the agricultural land in Romania, mainly arable land (more than half of the country's arable land) located in the most favourable agricultural areas of Romania (Otiman, 2012).

The large number of subsistence or semi-subsistence farms is one of the biggest problems of Romanian agriculture, as it has negative social effects. Subsistence farms have limited access to other sources of income than agriculture and, therefore, the welfare of a significant proportion of the rural population depends considerably on the farm profitability, which is rather small, due to low capital endowments and low labour productivity.

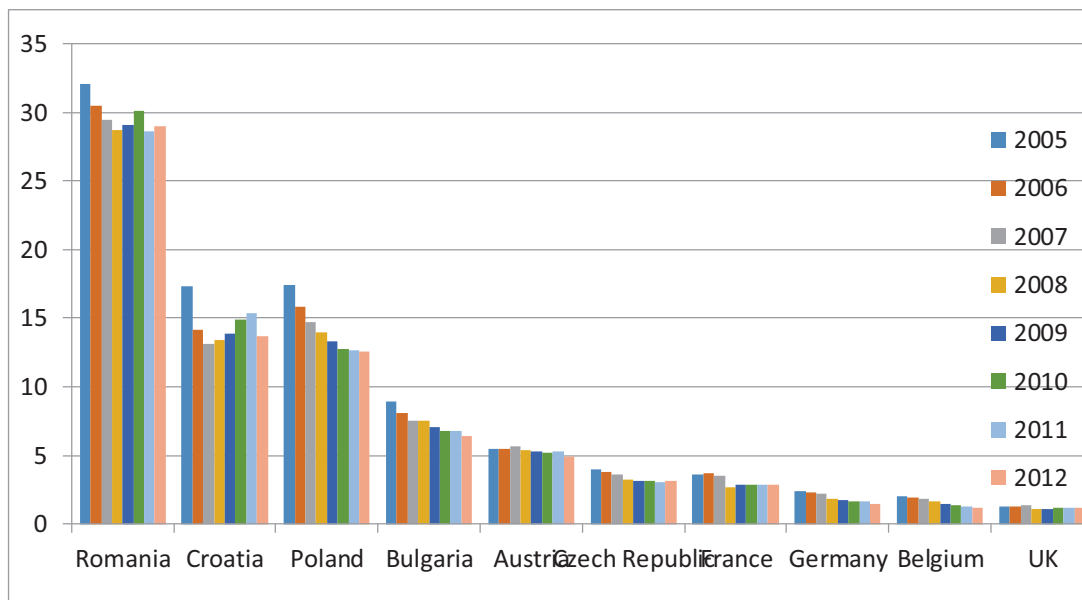
#### **Employment and labour productivity**

Agriculture is the most important activity in the rural areas in Romania, and labour is a very important production factor. One of the main features of Romanian agriculture is the great number of workers employed in agriculture. Romania is the country with the largest employment in agriculture within the European Union (Figure 1).

For example, in 2012, 29% of the employed population in Romania was working in the agricultural sector. This is the highest rate in the European Union and Romania is followed at great distance by Croatia, Greece and Poland (employment in agriculture around 13% of total employment).

In developed European countries the number of people employed in agriculture has diminished for several decades, reaching a level beyond the necessary limit (which leads to the usage of immigrant labor), while in Romania the situation is quite the opposite. An atypical process has been registered in the last decade of the past century, as Romanian labour force shifted from non-agricultural activities to agriculture, mainly by labour rationalization in non-agricultural sectors and early retirement. As labour surplus already existed in agriculture, the productivity of the new employees was null or almost null (Popescu, 2009).

**Figure 1 – Employment in agriculture (% of total employment)**

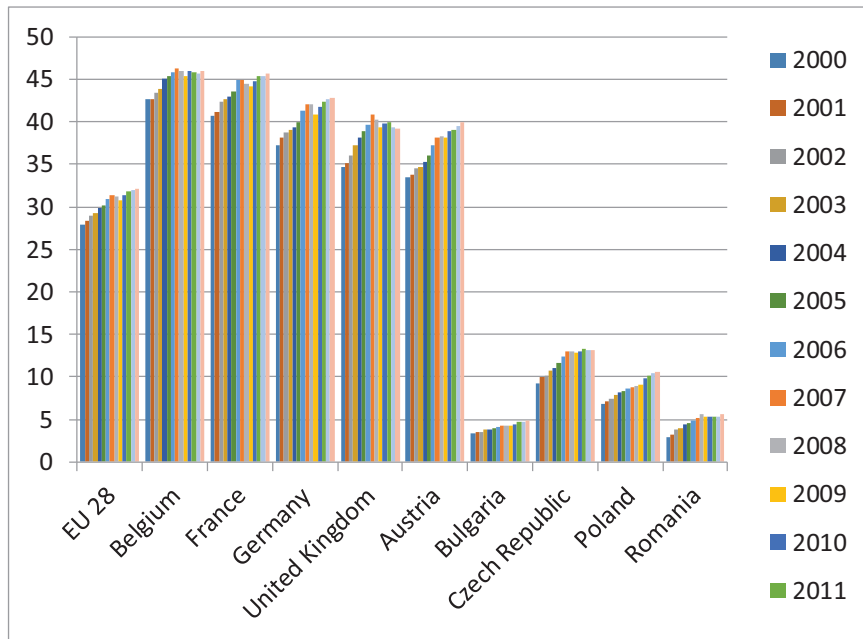


*Source: Author's calculations, World Bank Data*

Moreover, developments regarding rural population have a negative impact on the labour market of these regions. Within the last century, alongside with economic development, there has been a massive migration of rural population to urban areas and in recent years this has been amplified by the migration of young people to other countries, in search for higher income. As a result, the rural areas are nowadays confronted with problems regarding aging and declining population, declining birth rates and depopulation.

Under these circumstances, most of the people employed in agriculture are old, which influences their productivity. Labour productivity is an important factor which determines farms' economic performance and adequate income for farmers. In general, labour productivity in agriculture developing countries is very low, compared to the levels registered in developed countries. This is also the case of Romania. As Figure 2 shows, labour productivity in Romania is almost the smallest in the European Union, about six times lower than the EU 28 average. While in Romania the labour productivity has been oscillating around 5 Eur. per hour worked, the EU 28 average has been fluctuating around 30 Eur. per hour worked. In the European Union, Bulgaria has been the only country that has registered smaller labor productivity than Romania.

**Figure 2 – Labour productivity in Agriculture (Euro per hour worked)**



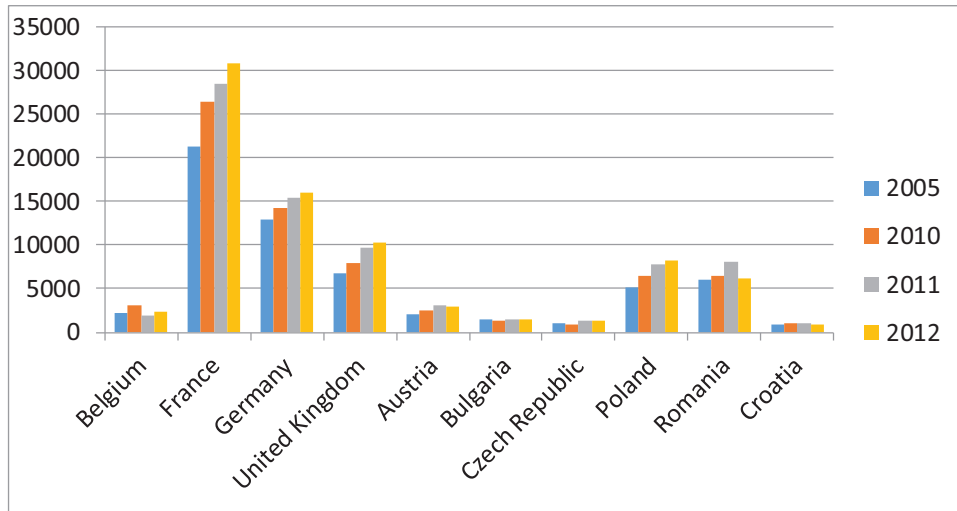
Source: Author's calculations, Eurostat Data

For example, in 2013, labour productivity in Romania was 5,6 Eur. per hour worked, the second smallest in the EU28, after Bulgaria (4,9 Eur. per hour worked), and a lot under the EU28 average, of 32 Eur. per hour worked. The greatest labor productivity in the EU28 was achieved, in 2013, by Norway (69,6 Eur. per hour worked), followed by Denmark (53,4 Eur. per hour worked).

### Agricultural output

Romanian agriculture's contribution to Gross Domestic Product is very high compared to other European countries, more than three times higher than the European average, of 1.7% (Ministerul Fondurilor Europene, 2013). Although the labour productivity in this sector is almost the lowest in the European Union, the Gross Value Added (GVA) of Romanian agriculture exceeds the ones of Austria, Bulgaria, Croatia and other European countries, but is low above the ones of the developed economies, such as France or Germany (Figure 3). However, in 2011 and 2012, the GVA of Romanian agriculture represented only 5,3% and 3,9% respectively of the total GVA of the EU28.

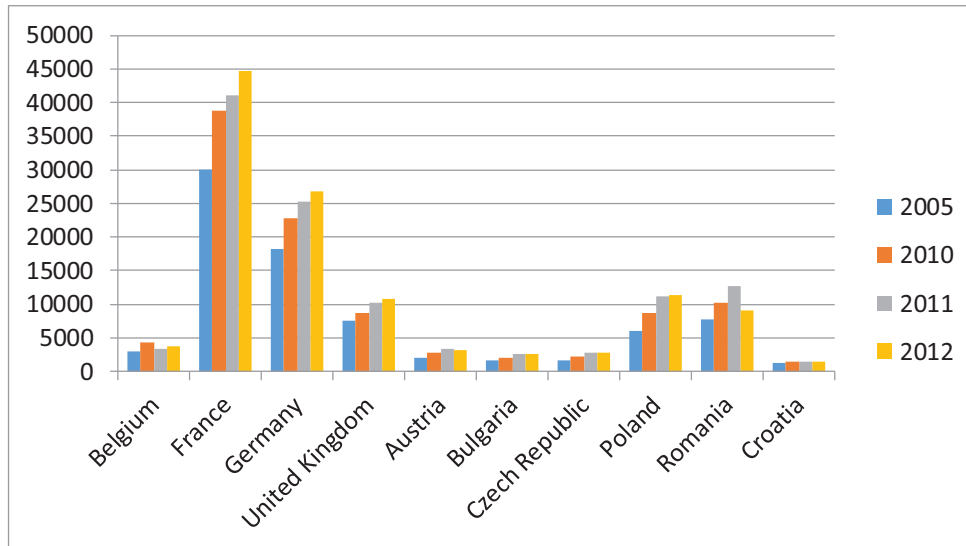
**Figure 3 - Gross Value Added of the Agricultural Sector (million Eur.)**



Regarding crop production, it is important to mention that the cultivated surfaces have diminished, in the period 2005 – 2012, both in Romania and in European Union. Under these circumstances, in this interval, the Romanian production of grain and potatoes has decreased, while the production of sunflower, rapeseed and sugar beet increased. In 2012, Romania was the fifth producer of cereals in the European Union, after France, Germany, Poland, UK and Spain, the second producer of sunflower after France, and the sixth producer of potatoes after Germany, Netherlands, France, UK and Belgium.

All in all, Romania`s total crop output is comparable with the ones of Poland or UK (Figure 4), and represented 6,2% and 4,3% respectively of the European crop output in 2011 and 2012. In 2012, Romania occupied the 8th place within the EU countries in terms of value of crop production (Cadrul National Strategic Rural).

Figure 4 - Crop output (million Eur.)



Source: Author's calculations, Eurostat Data

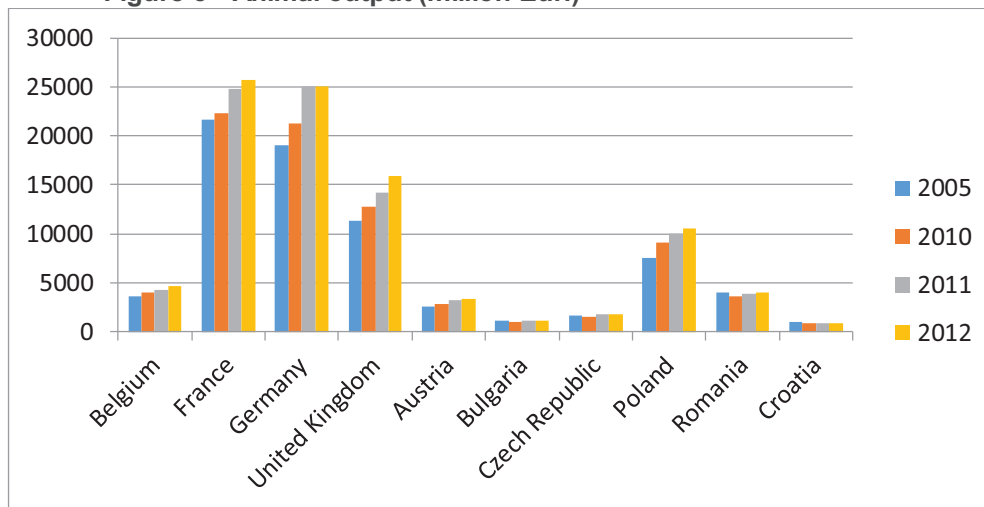
The animal production in Romania, increased in the period 2005 - 2012 by 13,2%, ranking 8<sup>th</sup> place in the EU in 2012, after France, Germany, Italy, Spain, UK, Netherlands and Poland (Cadrul National Strategic Rural).

In Romania, within the period 2005 – 2012, cattle effectives declined by almost 30%, while in the European Union the same indicator dropped by 3,6%. In 2012, nine EU countries registered higher numbers of cattle effectives than Romania. For example, in France, cattle effectives were 9,5 times higher than in Romania.

Regarding swine effectives, Romania registered a downward trend, similar to the European Union. In 2012 swine effectives in Romania were 20,5% under the number registered in 2012, and their level was more than five times lower than the ones in Germany.

On the other hand, sheep and goat effectives have registered an upward trend in 2012 compared to 2005, by 16%. Therefore, in 2012, Romania had the 4<sup>th</sup> biggest number of sheep and goat effectives, after UK, Spain and Greece.

Figure 5 - Animal output (million Eur.)



Source: Author's calculations, Eurostat Data

Similarly, the poultry effectives have increased by 7% in 2012 compared to 2005, and Romania came on the 9<sup>th</sup> place in the European Union in this respect, after France, UK, Poland, Germany, Spain, Italy, Hungary and Belgium.

### Conclusions

Low performance and competitiveness of the Romanian agriculture have been caused by improper agricultural policy in the context of low and diminishing investment to this sector. Therefore, in certain respects, Romanian agriculture is far beyond the developed European countries, and even beyond some of the developing ones.

Agriculture is an important sector of the Romanian economy, and almost one third of the employed population activates in this sector, but, unfortunately, labour productivity is a lot lower than in other European countries.

Under these circumstances, Gross Value Added (GVA) of Romanian agriculture is far below the ones of the developed economies. Although Romania is situated among the greatest five producers of cereals or sunflower within the European Union, the overall crop output is a lot lower than in developed countries, and regarding animal output, Romania's situation is even worse.

In order to achieve a competitive agriculture, Romania should implement appropriate agricultural policies in order to determine the concentration of production into profitable and effective medium-sized agricultural companies. Also, agriculture's financing should be improved so that it provides proper capital endowment, incorporating modern technology.

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