

SOME ASPECTS OF EMPLOYMENT IN ROMANIA'S AGRICULTURE IN THE EUROPEAN CONTEXT

Vasile Burja¹

ABSTRACT: Employment in agriculture is an important component of the policy of sustainable rural development. This has implications for the effective use of agricultural potential that Romania has in stabilizing rural population by achieving revenue to ensure an adequate quality of life. The analysis presented in this paper highlights common characteristics of employment in agriculture and the disparities recorded in Romania and other countries that joined the European Union later (Poland, Hungary and Bulgaria) against one of the European countries with developed agriculture (Germany). Raised disparities concern especially the high level of employment in agriculture in Romania and low labor productivity, but other features of employment-related to demographics, mode of employment, training and education are analyzed.

Keywords: employment, agriculture, labour productivity, rural areas

JEL Codes: J21, J43

Introduction

Within the perspective of 2020, The Common Agricultural Policy (CAP) is confronted with a set of challenges, pursuing three main objectives: development on agriculture sustainable base as to guarantee a long-term food security for European citizens and to contribute to growing world food demand; the development of agriculture in compliance with requirements of our environmental, water, animal health and welfare, plant health and public health requirements; to maintain viable rural communities, for whom farming is important economic activity creating local employment (COM 2010). Achieving these goals requires a long-term strategy on employment in rural areas and its active involvement in the achievement of sustainable economic and social development on sustainable principles.

Agriculture remains an important economic sector in rural areas in Romania because of the potential in natural resources and labor involved in this activity. Appropriate use of available labor in rural areas requires a competitive agriculture, organized into viable economic structures with appropriate technical equipment and appropriate financial strength. These conditions are necessary to achieve labor productivity similar to other economic sectors to ensure competitive income to farmers and profitable production.

Work in agriculture has particularities compared to labor in other sectors of the economy. In crop production labour usage is strictly seasonal. Many farms have a family character and all family members are involved in manufacturing. Sometimes working in agriculture is an occupation practiced

¹ "1 Decembrie 1918" University, Faculty of Science, Alba Iulia, Romania, e-mail: vasileburja@yahoo.com

to bring additional revenues (in Romania) or as a hobby in developed countries. In many cases people working in agriculture are employed and have no income from wages. The period of employment in family farms often extends beyond the age of retirement.

Statistics showing employment in agriculture sometimes provides inaccurate information because of different interpretation and understanding of the definition of "employment". Therefore conventional notions are used in order to express the labor use in agriculture such as the Annual work unit. Also bear in mind that agriculture in the developed countries of EU, migrant workers are working in agricultural campaigns, which often are not included in official statistics on employment. Analysis of statistical data on employment in agriculture can provide information about the "hidden unemployment" in rural areas.

This paper aims to analyze the workforce employed in Romanian agriculture, reporting disparities that manifest and identify some courses of action for their elimination. The analysis was performed by comparison with other European Union countries that have a significant agricultural potential: Germany, Poland, Hungary and Bulgaria. The comparison with these countries is not coincidental. Germany has a utilized agricultural area compared to Romania but the agricultural performance in this country is one of the highest in the European Union and can be considered a landmark in the use of labor in agriculture. Poland, Hungary and Bulgaria joined the EU later, and record a different performance in agriculture. Hungary is closer to the performance of agriculture in Germany and in Poland and in Bulgaria agriculture performance is lower.

Analysis of disparities between the respective countries on agricultural employment can provide decision makers strands at microeconomic or macroeconomic level in order to optimize the efficient use of labor from rural areas.

Literature review

Importance of rural areas in the EU is demonstrated both by the spatial dimension (Rural areas represent 93% of the EU-27 territory) and the percentage of population living in this area (20% of the population living in Rural areas and predominantly 38% in significant rural areas). Therefore rural development policy is certainly one of the most important economic policies promoted by the European Commission. This policy alone can not solve the problems facing rural areas and intersects with other public policies formulated in different areas such as regional development, transport, energy, information technology, innovation and employment (SEGIRA, 2010).

Rural areas in the EU are characterized by a great diversity in terms of human capital, economic, social and cultural and environment. The series OECD Rural Policy Reviews reflects and analyzes this rural diversity in its comprehensive reviews of rural areas and rural policy in several countries (OECD, 2007, OECD, 2009, OECD, 2011).

The diversity of rural areas is part of the richness of the EU, but many of these areas face a common challenge: the ability to create new jobs.

Economic growth and employment in rural areas are positively influenced by: natural resources and environmental quality, the various sector structures of the economy and the quality of life. A negative influence on rural development are: demographic trends and loss of young people, mono-sector Economies, poor, poor infrastructure, low levels of skills, knowledge, entrepreneurship and innovation, undeveloped social and institutional capital (SEGIRA, 2012).

Even though agriculture can no longer realistically be viewed as the drivers or 'backbone' (Terluin, 2003), it remains the main occupation for the inhabitants of rural areas and an important part

of the EU economy in terms of employment. Analysis of agricultural employment is closely related to other dimensions of employment in rural area and therefore many studies are dealing with this issue directly or indirectly. Aspects investigated are diverse and cover both the quantitative employment dimension expressed in number of individuals, a percentage of the active population, number of hours worked, as well as qualitative aspects related to the preparation, demographic structure, labor productivity and so on.

Labour Force in agriculture continues to be one of the main factors of production, which includes output produced and economic performance. Labor expenses are in the case of some fruit farms over 60% (Barraldi, F., 2006). How labor is used is different from one country to another. Therefore, a comparative analysis can reveal useful aspects on agricultural employment for both countries with developed agriculture and for countries with less efficient farming.

An interesting study on the effects of direct payments and rural development measures of the EU's Common Agricultural Policy (CAP) on employment in agriculture of 69 East German regions is achieved by M. Petrick and Zier P., (2012). The results show that the CAP Appears to be not a particularly effective tool for active job promotion in agriculture and the most pronounced effect on labour use in the farm sector is played by the general wage level. A similar conclusion is reached by Tocco B. et al. (2013) after analyzing the impact of CAP payments on the exodus of labour from agriculture in four countries (France, Hungary, Italy and Poland). K. Ritter (2008) provides a thorough analysis of the employment crisis in agriculture and the spatial inequalities in Hungary. The author shows that the role of the employment has significantly decreased in agriculture. This has increased the agricultural unemployment and rural depopulation due to the lack of jobs in other activities. At the same time the loss of knowledge and experience in traditional agriculture is a real danger.

The seasonal nature of agricultural production leads to the need for some of the workers to become part-time or seasonal employees. Family farms have a significant share in EU agriculture and they shall provide the bulk of the workforce needed in the family. Only 37% of these workers have full-time jobs and over 33% are working less than half time in agriculture (SEGIRA, 2012). Therefore we need a strategy for developing rural economy based on traditional industries and services. This strategy must generate jobs to ensure the economic viability of farm households (Meredith, D., 2011).

Labour productivity growth in agriculture is an important factor which depends on the economic performance of farms and ensuring adequate incomes for farmers. Productivity differences between agriculture in developed countries and countries with less efficient agriculture (including Romania) is great and has been analyzed in several studies (M. Smith, 2009; Burja C., 2012, Campos M., at.al., 2010). Most times these studies analyze the factors that influence productivity differences and propose solutions to reduce disparities.

Methodology

The making of the paper uses a descriptive analysis of spatial and dynamic process based on comparison. In this way it is possible to identify disparities that characterize employment in agriculture in Romania and in the analyzed countries. The analysis provides the opportunity to identify the causes of disparities, establishing a complex diagnostic on each component of employment and identifying areas for future action to eliminate disparities that Romania has regarding the development of agriculture and employment in this sector.

The analysis of agricultural employment is included in the broader context of employment in rural areas as research perspective requires this. Selecting countries under investigation is not

random. Romania has an agricultural potential similar to Germany and Poland in terms of agricultural utilized area. Germany has one of the most developed agriculture in the EU. Hungary is among the countries that joined the EU later and has a modern agriculture. Bulgaria joined together with Romania the EU, has traditions in agriculture and an important agricultural potential. The comparison with EU-27 provides information to guide future actions on the development of agriculture and employment in the sector to achieve the target levels forecasted for 2020 in the National Sustainable Development Strategy of Romania "to reach the current average level of the EU countries for the main indicators of sustainable development " (NSDS, 2008).

Simple processes of descriptive statistics and graphs were used in order to summarize the analyzed phenomena.

Data were collected from official statistics of Romania and the European Union and the theoretical documenting included a bibliography adequate to the research topic selected from specialized studies and the reports of the European Commission.

Analysis and Discussion

Sustainable rural development is a global issue that involves social research of economic and environmental aspects. Solving this problem is an obligation that belongs to the dimension of the countryside space on the three specified coordinates and the role that it has in the past, present and future of mankind. At the same time it appears as a moral obligation and a response to the unprecedented assault of the urban on rural areas. Therefore public policies developed at macroeconomic or microeconomic level closely monitor all aspects of rural development.

Rural development strategies analyze the size of the problems human capital, natural and anthropogenic faces. These are strongly connected, but we believe that man is the most precious capital and therefore the analysis of population issues is important. The countryside of Romania, but also from other countries is now facing major problems related to population.

Economic development over the past century has led to the massive migration of population from rural to urban. This was amplified in Romania by the massive migration of young people to other countries in the hope of finding a job that would ensure higher incomes. As a result, demographic indicators that characterize the rural population show negative aspects related to the aging, declining birth rates, decline of population and depopulation of rural areas. The population pyramid in rural areas of Romania (Figure 1) summarizes the mentioned issues.

We observe the narrowing of the pyramid base which means a lower share of young population. At the same time we observe higher life expectancy of women than men in rural areas.

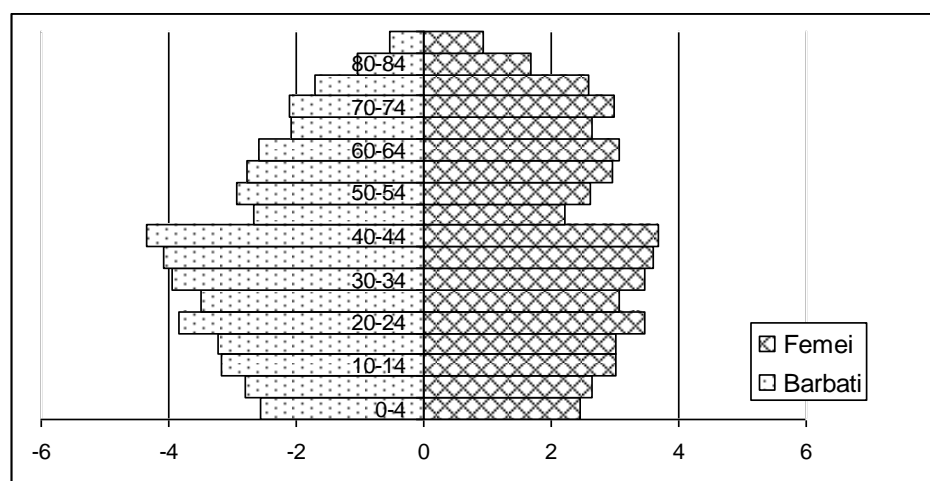


Figure no. 1 - Population pyramid in rural areas of Romania
 Source: Own calculation based on Romanian Statistical Yearbook, National Institute of Statistics, București, 2012

Certainly, an important aspect which the quality of life in rural areas depends on is economic development. It provides employment, household income and ensures overall development of infrastructure.

The feature of modern economies is the development of the tertiary sector. This is true for rural areas, even though traditionally the main economic activity was agriculture.

Table no. 1

Structure of the rural economy (% GVA by branch)

Country	Structure of the economy 2012			Change 2007 to 2010		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
EU 27	4.4	30.9	64.6	-0.2	-1.3	1.5
Bulgaria	11.2	36.7	52.0	-0.3	-2.8	3.1
Germany	2.4	35.2	62.4	0.0	0.6	-0.6
Hungary	6.5	39.3	54.2	-1.1	1.1	0.1
Poland	8.2	35.4	56.4	-1.4	2.6	-1.2
Romania	11.0	42.5	46.5	-0.2	4.7	-4.5

Source: EC, DG Agri, Rural Development in the EU Statistical and Economic Information Report 2013, pag.73

We notice in Table 1 a significant gap in the structure of the rural economy in Romania compared to the EU average and Germany. In 2010, the average tertiary sector in rural areas in the EU-27 was 64.6% and only 46.5% in Romania. The secondary sector has the largest share of the countries examined in Romania.

The general trend shown in the EU-27 between 2007-2010 was the rise of the tertiary sector while reducing the importance of the secondary sector and primary sector remained almost unchanged. This was due to the economic crisis experienced by European countries in the period,

which occurred mainly in industry and construction. The trend registered in Poland and especially in Romania had an opposite trend in that it decreases the weight of the tertiary sector and increases the share of the secondary sector.

The primary sector represented by agriculture, forestry and fishing has a significant share in Romania (11%) and recorded a slight decline during that period. Agriculture contributes about 7% to Romania's Gross Domestic Product in achievement compared to 0.8% in Germany. Certainly the economic structure reflects also the employment structure of rural population.

Table no. 2

Country	Employment development of primary sector -2012		Change in employment development in primary sector 2007 to 2012	
	1000 persons	% of total	1000 persons	% of total
	EU27	11 577.2	5.2	-933.5
BG	648.7	18.9	-75.2	-2.2
DE	668.0	1.6	6.0	0.2
HU	302.3	7.4	-13.5	-0.9
PL	1 947.6	12.6	-271.0	-2.6
RO	2812.0	30.6	-54.7	-0.4

Source: EC, DG Agri, Rural Development in the EU Statistical and Economic Information Report 2013, pag.100

We notice from Table 2 that about 5.2% of the employments of EU27 are working in the primary sector. The trend in the period 2007-2012 was the decrease in the number of people employed in this sector. In Romania, Poland and Bulgaria the number of people employed in the primary sector is highly compared to other sectors. In Germany only 1.6% of the employment force is working in the primary sector and in the period the trend has been growing by 0.2%.

The large number of people employed in the primary sector in Romania and Poland compared to the EU developed countries is one of the important issues that must solve rural development policy in those countries.

Certainly, in agriculture, the largest number of people is employed in the primary sector. The means of organization in agriculture in these countries affects the number of people employed in this work, the characteristics of employment (part-time, full-time employees, non-employees and work performance. In Romania in 2010 there were 3859 thousand holdings unlike Germany where there were only 299 000. Most farms in Romania are small and practice subsistence agriculture where agricultural production is for their own consumption.

Table no. 3

Country	Men		Women		%			
	1000 th	%	1000th	%	Employes	Non-employes	Full time	Part-time
	EU28	6726	62.6	4020	37.4	33.1	66.9	78.2
BG	132	67.3	64	32.7	50.8	49.2	95.6	4.4

DE	433	66.8	215	33.2	56.0	44.0	74.3	25.7
HU	138	75.0	46	25.0	71.0	29.0	93.1	6.9
PL	1175	57.4	870	42.6	14.6	85.4	81.5	18.5
RO	1370	52.4	1243	47.6	11.3	88.7	69.4	30.6

Source: Eurostat, Labour force survey

Table 3 presents the characteristics of the population employed in agriculture in the countries analyzed by sex, mode of employment and the time spent for this occupation. We notice that in Romania 88.7% of people involved in agriculture are non-employees. Also a large number of people (30.6%) work part-time in agriculture in Romania. In Hungary, we encounter a contrary situation, 71% are employees in agriculture and 93.1% work full-time. This shows that in Romania, agriculture for many people is an alternative to add revenues and not a main occupation, able to generate sufficient income for the family.

Gender structure shows that Romania and Poland have a large number of women employed in agriculture. Work in this area however, requires a major exercise and is therefore specific to men. For both countries female employment in agriculture is specific to the rural area where there are no jobs in other sectors.

Peculiarities of labor in agriculture are influenced by the seasonal nature of the work. This produces a flow of workers who migrate temporarily from the emergent countries to developed countries. For this category of workers, appropriate policies for social inclusion, specific ways of employment and social security, seasonal labour skills development are required.

The Age Pyramid shown above for the rural population in Romania shows a negative demographic trend that manifests itself in most rural regions in Europe: the aging of the EU Population. This trend certainly exists in agriculture.

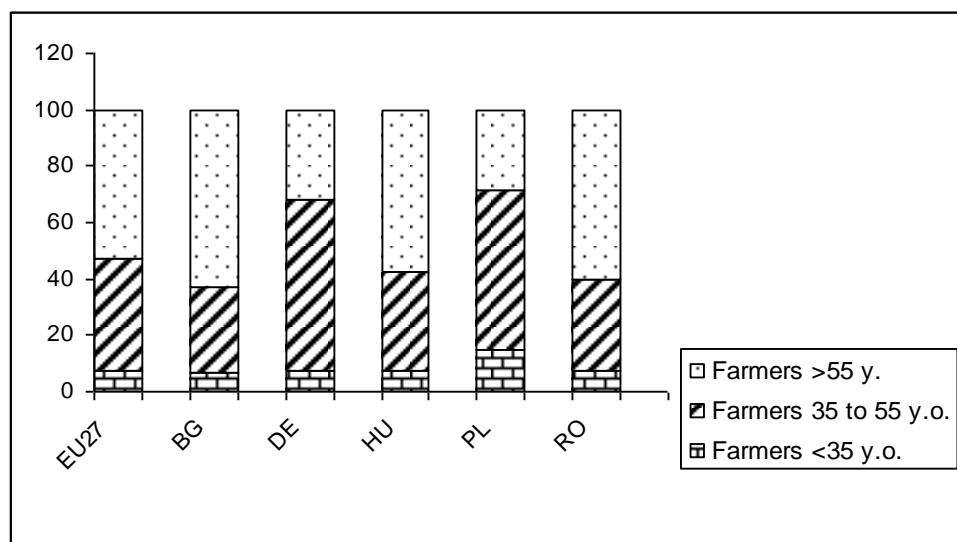


Figure no. 2 - Age structure in agriculture (2010)

Source: Eurostat, Farm Structure survey

We see in Figure 2 the low share of farmers under 35 years old compared to farmers > 55 y.o. In Romania, Bulgaria and Hungary, the share of farmers 35 to 55 y.o. is low compared to Poland or Germany. The ageing farming population creates serious difficulties for generation renewal, transfer of knowledge and specific skills. The Strengthening of competitive production structures in agriculture requires significant effort and sometimes sacrifice, a part of the current generation in rural areas do not want to assume. Therefore, measures that help to increase the attractiveness of work in agriculture are needed. They aim both to supplement income and increase the overall quality of life in rural areas.

The evolution of agricultural technology involves the use of complex knowledge and skills that cannot be acquired only by practical experience. In modern agriculture farmers use knowledge of biology, chemistry, veterinary medicine, mechanics and elements of management, accounting, law, etc.. There are of course specialized services but farmers should be able to resort to them and use them when they are needed. To increase competitiveness in agriculture there is a need for adequate training of farmers conducted in specialized schools or vocational training and updating knowledge through agricultural trainings.

Table no. 4

Training and education in agriculture, 2010

Country	Farm managers with agricultural training			Farm managers with practical experience only
	Basic training	Full training	Total	
EU 27	22.2	6.9	29.1	70.9
BG	2.6	0.8	3.4	96.6
DE	55.2	13.3	68.6	31.4
HU	11.3	3.3	14.6	85.4
PL	21.3	24.6	45.9	54.1
RO	2.1	0.4	2.5	97.5

Source: Own calculations based on Eurostat, Farm structure survey [ef_mptrainman]

According to data provided by the survey presented in Table 4 in 2010 over 70% of EU farm managers only have practical experience. The proportion of this category of farmers is higher in Romania (97.5%), Bulgaria (96.6%) and Hungary (85.5%) and in Germany the percentage is only 31.4%.

To increase the interest of farmers in improving their agricultural knowledge, the stimulation by facilitating access to European funding streams is necessary as well as creating an adequate infrastructure to meet the needs of education in agriculture.

Labour productivity in agriculture is the synthetic expression of the efficiency labor is used. This indicator establishes a direct relationship between inputs and outputs. Labour productivity growth in agriculture provides farmers with additional revenue and by reducing unit costs it leads to increased profitability and economic performance of agricultural holdings.

According to Boghean C., and State M., (2013) labour productivity depends on natural factors, technical, economic, social and structural. With the exception of natural factors (climate and fertility, volume, structure and quality of natural resources) other factors are employed and controlled by

farmers or others. The issues presented in the paper about the quantity and quality of human resources affect, of course, labor productivity in agriculture in the analyzed countries.

Table no. 5

Labour productivity in agriculture
GVA (at basic price - in EUR) / AWU, average 2007-2012

Contry	EUR/AWU	%
EU27	14967	100
Bulgaria	3826	26
Germany	29259	195
Hungary	5717	38
Poland	4054	27
Romania	4329	29

Source: EC, DG Agri, Rural Development in the EU Statistical and Economic Information Report 2013

We see from Table 5 that labour productivity in agriculture in Germany is almost two times higher than the EU average. Romania, Bulgaria and Poland have a labour productivity below 30% out of the EU average.

Labour productivity growth in agriculture in Romania can be accomplished primarily through organizational measures to achieve land unification and formation of viable market-oriented farms. This will allow the practice of advanced agricultural technologies based on capital investment to ensure stable agricultural production. Access to EU funds and proper crediting of agriculture can increase productivity by providing the necessary financial resources.

Our analysis will be continued in the future through the empirical research of employment in Romanian agriculture focusing on The Development Region 7 Center and with the analysis of other aspects of employment and unemployment in rural areas.

Conclusions

The analysis conducted in this paper has produced some significant issues regarding employment in Romania's agriculture compared to other EU countries. Agriculture is the economic sector which employs a significant part of the population in rural areas and has a major importance in the present and future European policies. Some aspects of employment in agriculture are common to the analyzed countries. Thus, we notice the diminishing of the population share working in agriculture along with an increasing proportion of population in the secondary and tertiary sector. Romania also follows this trend but still remains the country with the largest population employed in agriculture in the EU. Labour productivity achieved in Romanian agriculture is however one of the lowest in Europe mainly due to subsistence agriculture practiced by most farms.

Important disparities remain between the analyzed countries in other aspects of employment such as hiring mode, use of time, training and education, demographic structure of the population working in agriculture.

To have a competitive agriculture, Romania must implement appropriate agricultural policies that require an efficient and rational labor force and available agricultural potential. These measures were presented in the paper and can be summarized in the following directions: the production

concentration into viable units and the orientation towards products with a higher value added, labour force rejuvenation, farmer's level of education, proper equipment and machinery, the agricultural use of modern technology, access to financing and so on.

Labour productivity growth in agriculture will allow improving the quality of life of rural residents and at macroeconomic level, Romania will become a net exporter of agricultural products. At the same time there will be a surplus of labor that will depart from agriculture and the development of other economic activities in rural areas is necessary to ensure its sustainable development.

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