

ASPECTS OF EMPLOYMENT IN AGRICULTURE IN THE MAIN DEVELOPMENT REGIONS OF ROMANIA

Reta CONDEI, Agatha POPESCU, Aurelia BĂLAN, Valentina TUDOR

University of Agricultural Sciences and Veterinary Medicine Bucharest, 59 Marasti, District 1, 11464, Bucharest, Romania, Phone/Fax: 00 40 744 6474 10, Emails: r_condei@yahoo.com, agatha_popescu@yahoo.com, balanaureliav@yahoo.com, valentina_tudor@yahoo.com

Corresponding author: r_condei@yahoo.com

Abstract

Agriculture is a sector of primary importance in Romania, both through its contribution to the economy and the share of employment. Its continuous development and improvement and the countryside must be designed and analyzed under three main aspects, namely agriculture, food and environment. The current analysis takes into account the state of Romanian agriculture today, but also economic and human potential of rural areas in the main areas of development, and their evolution in 2008-2013. The rural space in Romania is characterized by poor economic diversification and a major dependence on agricultural activities, which results in obtaining low incomes for farmers. The rural labour force should be directed to other activities, particularly in services, based on a correct and permanent information, human resource awareness and training. The rural employment strategies include measures to improve the quality of human resources to facilitate access to non-agricultural employment in connection with labour market needs.

Key words: *agriculture, employment strategies, family farms, human resources, population, regions, rural areas, rural development*

INTRODUCTION

Agricultural development should be seen and analyzed from space and functions of the rural economy, the need for their development, taking into account:

- Ensuring food security and safety by providing full domestic demand for improved quality food and a surplus to domestic food consumption, available for export;
- Ensuring long-term sustainable ecological balance of the countryside by investing in infrastructure works and equipment protection planning;
- Preservation and protection of renewable natural resources (soil, water, air, biodiversity) and sustainable use of natural resources, agriculture, primarily soil, biodiversity conservation, implementation of policies to mitigate the effects of climate change;
- Consolidation of farms, upgrading technology and overall improvement of farmers' activities;
- Stimulating the formation of private-commercial European type family farms by

gradual reduction in subsistence farms; [4]

- Balanced territorial development of rural economy agriculture, expansion of SMEs and rural non-agricultural food and increasing employment of rural population through employment and stability in rural areas, mainly rural population of young workers;
- Restriction of disadvantaged rural areas and rural poverty;
- Harmonization of national education and scientific research with the European one and ensuring its sustainable partnership with Romanian food system [2, 3, 13].

The necessity to develop a modern and efficient agriculture at national level is determined by:

- requirement to ensure national food security and ensuring food safety of the Romanian population;
- natural resources, human and material Romanian agriculture;
- ecological suitability of Romania agricultural resources to provide high quality food products on the domestic and international market.

To ensure national food security Romanian

agriculture should follow:

- increasing agricultural yields per unit area and livestock;
- increase in plant and animal production;
- increase in processed food production;
- increasing the rate of absorption of EU funds.

The greatest chance of Romania on agricultural development is rational and optimal allocation of capital investment in rural infrastructure, farm modernization, expansion of storage-processing enterprises of food products and increase operating capital, both from own sources and of bank loans [5, 6]. Analyzing the situation of agriculture and rural areas and their evolution in 2008-2013 on the strengthening Romania's agricultural structures (nationally and by region), we have developed this material taking into account the economic, and human potential in agriculture and rural areas, but also from the integration requirement of the Romanian agriculture in the European food area [1, 2, 15, 16].

MATERIALS AND METHODS

Defining the place of agriculture in the national economy can be achieved through a set of relevant indices, related to resources and inputs, on the one hand and on the other hand to the results.

The relative instability of labour resources has to be taken into account when the medium and long term agricultural policy is set up. Also, the shaping and implementation of the agrarian structures (farms and production) should take into consideration the current situation and, especially, the demographic perspectives of resources employment in the rural areas and agriculture in terms of employment, the social status and the existing disparities in the territory by region [8].

The farming population means the population who has an income from agricultural activities, either as technicians or farmers or authorized independent farmers, while the population of subsistence agriculture means unpaid family workers in household production for own consumption. It was found

that the employment situation in rural areas is more difficult than in the urban areas and in the agricultural activities.

The paper is based on the statistical data provided by the National institute of Statistics for the period 2008-2013, and analyzed the following specific indicators: employment at national level and by development region in absolute figures and the share of each region, employment in agriculture by development region in absolute figures and the share of each region, employment structure by region, professional status and age group both at the national level and in agriculture.

The most used methods were the fixed basis index, and comparison method.

RESULTS AND DISCUSSIONS

Human resources in the national and rural development areas

Current situation and trends. Rural areas have a substantial growth potential and a vital social role. In 2012, Eurostat data showed that 45.5% of the total population lives in the rural areas. [8] In the period under review, In Romania, the employment fell by 232,000 people (2011), representing a decrease by 2.5% compared to 2008, while the employment in rural areas decreased by 202,000 people (2011) representing a decrease of 4.7%. [9]

The demographic decline is associated with the continuous degradation of the age structure caused by the aging of the population, meaning that in the future, the younger age groups will be reduced, while the elderly groups will increase. The demographic aging is more pronounced in the rural space than in the urban areas. [3,5 6,14]

The workforce reduction in the national economy by 381,500 persons actively employed in 2008-2013, agriculture contributed 27,300 people (2013). Across the countryside, rural population decline in 2008-2013 ranged between 201,908 and 56,822 persons representing a reduction of 2 to 4.7%. [7]

During the period under review, the farming population is 27.5% of total employment, and decreased by -5.2% in 2012 compared to 2008, while employment in the country

declined by 2.5 (Table 1).

The reduction in the number of rural inhabitants was due to several demographic, economic and social factors. In early 2008,

the share of population of 65 years and over in rural areas was 8.15% of the total population and fell to 7.41% in 2013.

Table 1. Dynamics of employment in agriculture and its share in Romania's employment, 2008-2013 (2008=100%)

Indicator	2008		2009		2010		2011		2012		2013	
	Thou Pers.	%	Thou Pers.	%	Thou Pers.	%	Thou Pers.	%	Thou Pers.	%	Thou Pers.	%
Employed persons, of which:	8,747	100	8,410.7	96.1	8,371.3	95.7	8,365.5	95.6	8,569.6	97.9	8,530.6	97.5
Employed in agriculture	2,407	100	2,410.7	100.1	2,439.9	101.2	2,442.0	100.1	2,510.0	102.8	2,380.1	94.8
Share of employed persons in agriculture in national employment (%)	-	27.5	-	28.6	-	29.1	-	29.1	-	29.2	-	27.9

Source: Own calculations based on data from Romanian Statistical Yearbook, 2008-2013 series, INS, Bucharest [10]

In terms of population, gender structure of the rural population is kept within limits which allow the normal course of specific processes socially and economically. This distribution should be one of the important factors of realization of human resource development strategies.

In the main development areas of Romania, the largest share of population employed belonged to Bucharest-Ilfov and North-East regions (each over 14%), followed by the North-West and South Muntenia regions with a share of over 13% each (Table 2).

Table 2. Share of Romania's employment by development regions, 2008-2013 (%)

Development regions	2008	2009	2010	2011	2012	2013
Total employment at national level, of which:	100	100	100	100	100	100
North-West region	13.6	13.7	13.8	13.8	13.8	13.9
Central region	11.9	11.9	11.9	12.0	12.1	12.2
North-East region	14.2	14.3	14.4	14.2	14.3	14.1
South-East region	12.0	12.0	11.9	11.8	11.8	11.8
South-Muntenia region	13.7	13.8	13.8	13.8	13.8	13.7
Bucharest-Ilfov region	14.6	14.5	14.5	14.6	14.6	14.7
South-West Oltenia region	9.9	9.9	9.9	9.9	9.8	9.7
West region	9.8	9.7	9.7	9.7	9.7	9.7

Source: Own calculations based on data from Romanian Statistical Yearbook, 2008-2013 series, INS, Bucharest [10]

Employment in agriculture in the main development region shows that five of the eight development regions have between 13-20% share each, altogether with over 80% of human resource potential (Table 3).

The number of the Romanian agricultural family holdings, as registered by APIA, totaled 1.1 million, divided by size classes are presented in Table 4.

A number of total of 12,034 agricultural

companies, societies and associations with legal personality, representing 1.07 % of the total number of holdings own 5, 113,458 ha, that is 52.11 % of the total agricultural land.

In this companies there are working many skilled workers in agricultural occupations, unskilled workers and technical specialists, economists and managers with higher education. [1]

Table 3. The share of Romania's employment in agriculture by development region, 2008-2013 (%)

Development regions	2008	2009	2010	2011	2012	2013
Total employment in agriculture, of which:	100	100	100	100	100	100
North-West region	15.07	15.06	14.91	15.04	15.03	15.04
Central region	10.03	10.07	9.92	10.01	10.01	10.01
North-East region	20.32	20.29	20.53	20.29	20.25	20.25
South-East region	13.50	13.53	13.50	13.62	13.58	13.60
South-Muntenia region	17.62	17.62	17.55	17.59	17.64	17.60
Bucharest-Ilfov region	1.55	1.49	1.50	1.51	1.51	1.53
South-West Oltenia region	13.57	13.59	13.73	13.60	13.60	13.58
West region	8.36	8.31	8.33	8.32	8.35	8.35

Source: Own calculations based on data from Romanian Statistical Yearbook, 2008-2013 series, INS, Bucharest [10].

Table 4. Romania's farm structure by holding type in 2010

Exploitation Area (ha)	Number of exploitations	%	%	Area (ha)	%	%
Family exploitations (FE)						
1-5	900,633	80.46		2,199,166	22.48	
5-10	145,963	13.04		963,060	10.03	
10-50	54,365	4.86		1,055,972	10.77	
50-100	6,325	0.57		451,522	4.61	
1. Total FE	1,107,286	98.93	28.72	4,669,720	47.89	31.80
Commercial exploitations (CE)						
100-500	9,315	0.83		2,087,244	21.33	
500-1000	1,808	0.16		1,240,321	12.57	
1000-5000	882	0.08		1,457,029	14.86	
5000-10000	20	0.00		168,219	1.51	
>10000	9	0.00		180,645	1.84	
2. Total CE	12,034	1.07	0.31	5,113,458	52.11	34.82
Unfunded subsistence exploitations (UE)						
3. Total UE	2,736,680	x	70.97	4,901,822	x	33.38
TOTAL	3,856,000	x	100.00	14,685,000	x	100.00

Source: Data provided by APIA, 2010

In addition to the number of 1.1 million farmers, 2.74 million rural inhabitants are practicing agriculture in part-time subsistence farms unfunded by APIA, but holding 1/3 of the country's usable agricultural area (4.9 million ha, meaning 33.4%).

Of the 1.1 million family farms, the largest share is held by those with an area of up to 5 hectares, representing 80.46%, followed by the farmers owning between 5-10 hectares, accounting for 13 %. In terms of human resource, rural development strategy is based on the distribution of farmers - heads of exploitations by age and, especially, the share of young farmers nationwide. [7] (Table 5).

The farmers distribution by age group at the national level highlighted the following aspects:

- The largest share is held by farmers over the age of 70 years (31.9% of farmers), followed by the age group between 61-70 years representing 26.5% of all farmers.
- Farmers aged 31-60 years represent 40.6%, while those aged under 30 have a share of 1% of all farmers.

The high share of farmers excessive elderly (over 60 years and especially over 70 years), is a serious problem for the future of their holdings.

Table 5. Distribution of farmers by age

Age	Years	Under 30 years	Between 31-40 years	Between 41-50 years	Between 51-60 years	Between 61-70 years	Over 70 years	Total farmers
Number of farmers	Thousands pers.	10.2	74.7	141.3	231.8	292.6	351.4	1,101.7
	%	1	6.8	12.8	21.0	26.5	31.9	100
The average farm area	ha	9.1	7.0	6.4	5.0	4.0	3.2	4.5

Source: Data processed by APIA, 2010

The fact that almost 58.4% (i.e.644,000 farmers) are older than 60 years, holding in exploitation 2.31 million ha of agricultural land (over 25% of the country's arable land) is one of the major problems of human resources strategy in rural areas.

The young farmers aged under 40 represent about 8% of all farmers, and as a result, it is necessary to increase their number because they should be the core of human resources in rural areas in the future.

Agriculture is the backbone of the rural economy, but non-agricultural activities and sources generated by them are becoming increasingly important for households in rural areas.

The development of the agricultural sector is a key factor for increasing the employability of labour and income.

The employment rate of people aged 20-64

years is 63.3% by 6.7 % lower compared to the national target of 70% set for 2020.

The rural population employment rate is 63.7% compared with the urban population which recorded a 62.2% occupancy rate. [3]

The main features of the employment in rural areas are the following ones:

- Dwindling national employment with 381,500 persons (i.e. 4.4%) compared to 2008;

- The concentration of population employed in agriculture. At national level, the agricultural sector benefits from 27.5 % to 29.2% of total employed persons.

- The structure of the employed population by employment status showed that the largest share in total employment is held by employees (59.82 - 56.28%), self-employed (26.27%) and family workers(15.57%) (Table 6).

Table 6. Structure of national employment and agricultural employment by professional status, 2008-2013 (%)

Specification	2008	2009	2010	2011	2012	2013
Total employment at national level, of which:	100	100	100	100	100	100
Employees	59.82	58.01	54.72	55.71	55.74	56.28
Employers	1.83	1.48	1.73	1.50	1.20	1.87
Self-employed	24.72	24.73	26.81	25.61	26.15	26.27
Family workers	13.62	15.75	16.72	17.16	16.90	15.57
Total employment in agriculture, of which:	100	100	100	100	100	100
Employees	4.30	4.40	3.89	4.01	4.19	4.54
Employers	0.14	0.10	0.05	0.06	0.07	0.22
Self-employed	50.04	47.37	46.01	43.07	44.42	45.06
Family workers	45.50	48.12	48.30	52.84	51.31	50.16

Source: Own calculations based on data from Romanian Statistical Yearbook, 2008-2013 series, INS, Bucharest [10]

- The structure of employment in agriculture of the country highlighted that the largest share belonged to the self-employed people (45-50%), and family workers.

- In agriculture employees have a share below 4.5%.

- The aging of the agricultural population.

The employment rate belonging to the age group 15-24 years is 30.5%, while the rate of those under 55-64 years age group is 52.6 %.

- The employment in agriculture is characterized by a high percentage of people aged over 65 years with more than the share of this age group nationally, which is 6%.

Table 7. The share of number of employees in agriculture by region, 2008-2013 (%)

Development regions	2008	2009	2010	2011	2012	2013
Total employees in agriculture, of which:	100	100	100	100	100	100
North-West region	9.18	8.68	9.24	9.16	8.65	9.30
Central region	12.17	12.04	11.14	11.44	12.58	11.95
North-East region	15.74	15.50	15.90	15.80	15.74	15.96
South-East region	15.97	17.72	16.50	17.11	16.55	17.37
South-Muntenia region	20.76	21.46	20.93	20.24	20.85	20.09
Bucharest-Ilfov region	4.86	4.13	4.72	4.84	4.53	4.56
South-West Oltenia region	7.87	8.56	8.55	8.45	7.95	7.92
West region	13.41	11.86	12.99	12.92	13.11	12.82

Source: Own calculations based on data from Romanian Statistical Yearbook, 2008-2013 series, INS, Bucharest [11].

- The scarcity of educational capital: the share of people employed in agriculture with a higher educational level is 3.4%, the average level of training persons was 50.2%, people with low education level was 46.4% . [8]

- The analysis of the number of employees in agriculture in the main development region shows the highest share of this category in the region South-Muntenia (over 20%) of all employees, followed by the South-East and North-East, each with a share more than 15%. (Table 7)

Employment of human resources in rural areas is characterized by the following trends:

-The national employment in the analyzed period is reduced by 2.1-4.4%, while the population employed in agriculture increased by 2.8% and represents 29.2% of the working population;

-The structural change of the active population - farmers aged under 30 years is only 1%, and those aged 31-50 years represent about 20% of farmers;

-The scarcity of educational level inhibits labour mobility;

-The slow modernization of rural employment;

-The mismatch between supply and demand for labor in rural areas.

The strategy includes measures to stop the rural population demographic phenomena, rebalancing the age structure, modernization of education and training of the rural population.

CONCLUSIONS

The dependence of the rural population to subsistence agriculture is a weakness of the labour force in Romania, self-employment

being associated with subsistence rather than entrepreneurship in agriculture.

So, the number of self-employed people reached 2.1 million (25 % of total employment). [9]

Romania also faces a low level of labour employed in non-agricultural activities in rural areas. The decreased number of people employed nationally 381,500 people, of which in the rural areas 202,000 people is a major shift of the occupational structure of employment. Almost the whole lost population employed in agriculture had the employment status of self-employed (including unpaid family worker).

-The tendency to reduce non-wage employment was accompanied by a decrease in the number of employees at national level by 698,000 people (in 2011 compared to 2008), which represented a 14% decrease. In agriculture the number of employees is in average 2.1-2.3% of employees nationally and suffered a decrease by 8.7% in 2010 compared to 2008.

As regards the structure of employment by professional status in 2013, 56.28% of the employed persons had the employed status (59.82% in 2008), 26.27% self-employed, and a member of an agricultural or a cooperative (24.72% in 2008), 15.57% unpaid family worker (13.62% in 2008) and 1.87% employer (1.83% in 2008);

The directions of human resources employment in the rural areas are focused on: modernization of education and training of the rural population, modernization of agriculture by implementing technological innovation, and scientific management, promoting

occupational mobility of the labour force in the rural areas in order to focus on its agricultural and non-agricultural occupational fields, promoting rural entrepreneurship and providing support services for initiating and fostering employability non-agricultural business in the rural areas.

[15]Socio-economic rural development perspective
[16]Stoicescu, A., Alecu, I. N., 2012, Human resources development of the rural area-As a rural development component in the Bucharest-Ilfov region of Romania. Scientific Papers Series "Management, Economic Engineering in Agriculture and rural development", Vol. 12(3): 175-178.

REFERENCES

- [1]Agrifood strategy Romania
[2]Ciolos, D., Luca, L., Giurca, D., 2010, 20 years looking for consistency in the agricultural policies of Romania, in vol. I, coord: Murea, R, Boari, V, Vlas, N, publisher European Institute, Iași
[3]Condei Reta, Stefan Ecaterina, 2011, Elaborating human resources and development programmes-Basic requirement of the organisation's economic efficiency, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol.11(2):30-33
[4]EUROSTAT, electronic database
[5]Iorga Adina, Toma Elena, Dobre Carina, Muscanescu Alexandra, 2014, Rural labor force size and structure analysis, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 14(2):169-173
[6]Manescu Camelia, Mateoc Teodor, Mateoc-Sirb Nicoleta, 2014, Studies concerning the development level of agriculture in Romania, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 14(1):197-203
[7] National Strategic Rural Framework 2014-2020
[8]National Strategy for sustainable development
[9]National Strategy for employment of labour
[10]National Institute of Statistics, Database TEMPO Online
[11]National Institute of Statistics, Romanian Statistical Yearbook series, 2009-2014
[12]Oțiman, P.I., 2012, Agrarian structure of Romania, a large (and unresolved) social and economic problems of the country, in "Agricultural Economics and Rural Development", Year IX, No.1, Publisher of Romanian Academy, Bucharest.
[13]Oțiman Păun Ion, Toderoiu Filon, Alexandri Cecilia, Florian Violeta, Gavrilăscu Camelia, Ionel Iuliana, Sima Elena, Tudor Monica Mihaela, 2014, Sustainable Development Strategy for the Agri-food Sector and Rural Area – Horizon 2030, Procedia Economics and Finance, Volume 8, 2014, Pages 510–517, 1st International Conference 'Economic Scientific Research - Theoretical, Empirical and Practical Approaches', ESPERA 2013
[14]Popescu Agatha, Grigoras Mircea Adrian, 2011, Research concerning rural versus urban population-Present and Prospect, Scientific Papers Series "Management, Economic Engineering in Agriculture and rural development", Vol. 11(2):151-156

