

## RURAL LABOR FORCE SIZE AND STRUCTURE ANALYSIS

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### **Abstract**

*The paper aimed to analyse the main characteristics of Romania's rural labour force by concentrating on dynamics and structure of economically active population in the period 2007-2012. We analysed the main labour market indicators provided by statistical surveys like active population, unemployment, activity rate, unemployment rate, etc. by age, educational level and group of occupations. Our analysis points out the current dimensions of labour force from rural areas, and more importantly the main problems on this market (lack of jobs, the increase of unemployment, the aging process of population (the continuous reduction of young population) and the low level of education) and also the real necessity of SME development support and training opportunities for economically active rural population.*

*Key words:* age, economically active population structure, education, group of occupations, rural population

### **INTRODUCTION**

The Romanian rural labour market was in the last decades virtually mono-sectored, the majority of population being occupied in the agricultural sector, while the commercial and informal sectors are of small-scale development (Chaves, 2001). This fact is due to the high number of workers released from the industry after 1990 and the net migration to the rural area which resulted in the increase of labour force employed in agriculture, hunting and fishery and to the development of subsistence economy (Dachin, 2008).

Due to this labour market structure, the rural areas are characterized by many problems like: the people aging; the lack of jobs, low training level and low productivity. Also the lower developments of non-agricultural sectors oblige mainly young people to look for jobs in the cities or to emigrate in other EU countries (Popescu, 2013). The most important problem is that unemployment ratio is higher because it is very difficult to find new jobs especially if we take into consideration that most unemployed people are middle aged, and they continue their unemployment registration so that they may receive unemployment benefits or assistance (Yoshii, 2000). The majority of

the employed rural people which lose their job become self-employed and the only options are in the agriculture sector due to the lack of jobs in other sectors (Dostie et al., 2006).

### **MATERIALS AND METHODS**

The statistical data on Romania's labour force were provided by the National Institute for Statistics (AMIGO studies) and refer to the period 2007-2012. To analyze this data we used the index, share and comparison methods based on the main labour force indicators. Calculation and analysis of labour force structure by age, sex and education levels was also another method used within this paper.

### **RESULTS AND DISCUSSIONS**

Rural population, due to urban and external migration and also to the changes in its structure, had in the last years a decreasing trend, especially regarding to the active and occupied population. In 2012, in rural areas lived 9.65 mil people, with 0.3% lower than in 2007.

After the integration in EU and on the background of financial crisis the occupied population decreased with 2.2% and the

unemployment increased with 3.3% (Table 1). In these conditions the activity rate and the occupancy rate decreased with over 1.5 percentage points.

Table 1. Main indicators regarding Romanian population (2007-2012)

	2007	2012	2012/2007 %
Rural population	9687881	9654223	99.7
Population 15 years of age and over	7992400	8066731	100.9
Share in total population - %	82.5	83.6	-
Economically active population	4499860	4410994	98.0
Share in total population - %	46.4	45.7	-
Occupied population	4280783	4184635	97.8
Unemployed population	219076	226359	103.3
Economically inactive population	5188021	5243229	70.5
Share in total population - %	53.6	54.3	-
Activity rate	56.3	54.7	-
Occupancy rate	53.6	51.9	-
Unemployment rate	4.9	5.1	-

Table 2 Main indicators regarding Romanian population by age (2007-2012)

	2007	2012	2012/2007
<b>Total population</b>			
Population 15 years of age and over	7992400	8066731	100.9
Young (15-24 year)	1367254	1294300	94.7
Share in total population - %	14.1	13.4	-
Share in population 15 years of age and over - %	17.1	16.0	-
Working age population (15-64 year)	6182298	6306398	102.0
Share in total population - %	63.8	65.3	-
Share in population 15 years of age and over - %	77.4	78.2	-
Elderly (55-64 year)	1048285	1101297	105.1
Share in total population - %	10.8	11.4	-
Share in population 15 years of age and over - %	13.1	13.7	-
<b>Economically active population</b>			
Population 15 years of age and over	4499860	4410994	98.0
Young (15-24 year)	525913	478273	90.9
Share in population 15 years of age and over - %	11.7	10.8	-
Working age population (15-64 year)	4022737	4051428	100.7
Share in population 15 years of age and over - %	89.4	91.8	-
Elderly (55-64 year)	605971	613541	101.2
Share in population 15 years of age and over - %	13.5	13.9	-
<b>Occupied population</b>			
Population 15 years of age and over	4280783	4184635	97.8
Young (15-24 year)	440387	402118	91.3
Share in population 15 years of age and over - %	10.3	9.6	-
Working age population (15-64 year)	3803930	3825321	100.6
Share in population 15 years of age and over - %	88.9	91.4	-
Elderly (55-64 year)	598527	603457	100.8
Share in population 15 years of age and over - %	14.0	14.4	-
<b>Unemployed population</b>			
Population 15 years of age and over	219076	226359	103.3
Young (15-24 year)	85526	76155	89.0
Share in population 15 years of age and over - %	39.0	33.6	-
Working age population (15-64 year)	218807	226107	103.3
Share in population 15 years of age and over - %	99.9	99.9	-
Elderly (55-64 year)	7444	10084	135.5
Share in population 15 years of age and over - %	3.4	4.5	-

The largest rural population group, with a functional economic-social activity, respectively the 15-64 year old population (working age people), increases its share from

63.8% to 65.3% in the total population (Table 2).

We may also observe a reduction in young people group in favour of the elderly people group, a tendency that is more and more evident in our country in the last decades. The observed trend has direct implications on the economic development of rural areas due to the implications on the labour force dimension in the future.

These mutations occurring in the age structure of the population emphasis the demographic aging population process, demonstrated by the increase of the proportion of older adult population, the decreasing in number and proportion of young people under 15 years and also to the increasing life expectancy. This process is important if we take into consideration that over 40% of elderly people live in rural areas (working or inactive people).

Economically active population from rural areas worked in 2012 in proportion of 58.2% in agricultural sector and 12.5% in the industry sector (Table 3). From this population 37.4% are employees, 33.6% are self-employed and 25.7% are unpaid family workers.

Table 3. Active population by professional status in 2012

	Active population	Employee	Employer	Self-employed	Unpaid family worker
<b>Agriculture</b>	<b>2566409</b>	<b>140986</b>	<b>0</b>	<b>1301678</b>	<b>1120464</b>
Structure - %	100.0	5.5	0.0	50.7	43.7
Share - %	58.2	8.6	0.0	87.7	98.8
<b>Industry</b>	<b>553531</b>	<b>532645</b>	<b>0</b>	<b>14472</b>	<b>0.0</b>
Structure - %	100.0	96.2	0.0	2.6	0.0
Share - %	12.5	32.3	0.0	1.0	0.0
<b>Construction</b>	<b>283018</b>	<b>179600</b>	<b>0</b>	<b>97590</b>	<b>0.0</b>
Structure - %	100.0	63.5	0.0	34.5	0.0
Share - %	6.4	10.9	0.0	6.6	0.0
<b>Commerce</b>	<b>265352</b>	<b>231322</b>	<b>9253</b>	<b>22039</b>	<b>0.0</b>
Structure - %	100.0	87.2	3.5	8.3	0.0
Share - %	6.0	14.0	38.3	1.5	0.0
<b>Public services</b>	<b>367590</b>	<b>355536</b>	<b>0</b>	<b>0</b>	<b>0.0</b>
Structure - %	100.0	96.7	0.0	0.0	0.0
Share - %	8.3	21.6	0.0	0.0	0.0
<b>Other services</b>	<b>204564</b>	<b>176220</b>	<b>0</b>	<b>11735</b>	<b>0.0</b>
Structure - %	100.0	86.1	0.0	5.7	0.0
Share - %	4.6	10.7	0.0	0.8	0.0
<b>Others sectors</b>	<b>47534</b>	<b>24018</b>	<b>0</b>	<b>22554</b>	<b>0.0</b>
Structure - %	100.0	50.5	0.0	47.4	0.0
Share - %	1.1	1.5	0.0	1.5	0.0
<b>Rural population (including unemployed people)</b>	<b>4410994</b>	<b>1648518</b>	<b>24132</b>	<b>1483408</b>	<b>1134069</b>
Share - %	100.0	37.4	0.5	33.6	25.7

We mention another aspect which is that 87.9% of the working places from rural areas are in the private sector (3879193 persons), drawing

attention on the importance of public policy to sustain SME sector in rural areas.

The analysis of rural population by professional status and occupation categories revealed that employed people are in proportion of 25.5% qualified workers, 18.5% have a qualifications for the services sector (especially sellers) and 33.1% have another occupation (from which 66.5% are unqualified workers).

Also, if we analyze the rural active population by professional status and groups of occupations (Table 4) we may observe that the unskilled workers (without qualifications) are in proportion of 63.4% in agriculture and 11.2% in the industry sector. Actually in the industry sector only 44.0% of workers are artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance and less than 10% have a higher preparation. In construction and services sectors the number of qualified workers is higher reaching 63.2% and respectively 56.6%.

Table 4.Active population by professional status and groups of occupations in 2012

	Number	Structure %	Share %
<b>Agriculture</b>			
Experts with intellectual and scientific occupations	9041	0.4	5.9
Farmers and skilled workers in agriculture, forestry and fishing	2062254	80.4	99.0
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	16664	0.6	3.3
Others categories of occupations, from which:	461861	18.0	45.4
Unskilled workers	429075	16.7	63.4
<b>Industry</b>			
Experts with intellectual and scientific occupations	11587	2.1	7.5
Technicians, foremen and assimilated	11690	2.1	12.7
Administrative clerks	8730	1.6	12.9
Workers in services and trade and assimilated	8970	1.6	2.7
Farmers and skilled workers in agriculture, forestry and fishing	8977	1.6	0.4
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	243426	44.0	47.7
Others categories of occupations	250412	45.2	24.6
Unskilled workers	75730	13.7	11.2
<b>Construction</b>			
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	178932	63.2	35.1
Others categories of occupations, from which:	85172	30.1	8.4
Unskilled workers	66101	23.4	9.8
<b>Commerce</b>			
Members of legislative, executive, senior officials of public administration, managers and clerks of economic, social and political units	12661	4.8	32.3
Technicians, foremen and assimilated	16621	6.3	18.0
Administrative clerks	8826	3.3	13.1
Workers in services and trade and assimilated	150170	56.6	45.8
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	27709	10.4	5.4
Others categories of occupations, from which:	44601	16.8	4.4
Unskilled workers	22658	8.5	3.3
<b>Public services</b>			
Experts with intellectual and scientific	93987	25.6	61.2

	Number	Structure %	Share %
<b>Other services (Transport and storage, hotels and restaurants, information and communication, financial intermediation and insurance, professional, scientific and technical sectors)</b>			
Experts with intellectual and scientific occupations	8765	4.3	5.7
Technicians, foremen and assimilated	8035	3.9	8.7
Administrative clerks	17070	8.3	25.3
Workers in services and trade and assimilated	33844	16.5	10.3
Farmers and skilled workers in agriculture, forestry and fishing	8902	4.4	0.4
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	7339	3.6	1.4
Others categories of occupations, from which:	75798	37.1	7.5
Unskilled workers	8114	4.0	1.2
<b>Others sectors</b>			
Members of legislative, executive, senior officials of public administration, managers and clerks of economic, social and political units	26494	15.5	67.7
Experts with intellectual and scientific occupations	30238	17.7	19.7
Technicians, foremen and assimilated	27494	16.1	29.9
Administrative clerks	20155	11.8	29.9
Workers in services and trade and assimilated	33068	19.4	10.1
Farmers and skilled workers in agriculture, forestry and fishing	2974	1.7	0.1
Artisans and skilled workers in handicraft, machinery and equipment regulation and maintenance	23376	13.7	4.6
Others categories of occupations, from which:	40789	23.9	4.0
Unskilled workers	42322	24.8	6.2

This distribution of labour force between economy sectors is mainly due to the educational levels of rural population (Table 5).

Table 5.Active population by professional status and groups of occupations in 2012

	Total	15-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over
<b>Higher education (ISCED 5)</b>	<b>4.6</b>	<b>4.0</b>	<b>8.7</b>	<b>3.8</b>	<b>3.8</b>	<b>3.3</b>	<b>0.0</b>
<b>Medium</b>	<b>53.5</b>	<b>50.8</b>	<b>54.8</b>	<b>67.5</b>	<b>63.5</b>	<b>38.1</b>	<b>11.5</b>
Post high school specialty or technical foremen (ISCED 4)	3.0	0.0	4.0	1.9	2.5	5.3	0.0
High school (ISCED 3)	42.1	64.8	49.0	39.9	35.5	26.2	25.7
Vocational, complementary or apprenticeship (ISCED 3)	48.5	33.7	47.0	46.4	50.9	67.9	62.9
High school first cycle (ISCED 3)	6.4	0.0	0.0	11.7	11.1	0.0	0.0
<b>Low</b>	<b>41.9</b>	<b>45.2</b>	<b>36.5</b>	<b>28.7</b>	<b>32.8</b>	<b>58.6</b>	<b>87.7</b>
Gymnasium (ISCED 2)	81.4	88.0	89.7	91.4	89.7	82.6	48.1
Primary (ISCED 1)	17.1	10.3	8.7	6.9	9.2	16.7	49.5
No education	1.5	0.0	0.0	0.0	0.0	0.0	2.4

The economically active population from rural areas has in proportion of only 53.5% a medium education level. From these people

only 48.5% have a vocational, complementary or apprenticeship form of education (level of education that offer a skilled labour form of education which permits a more direct integration on the labour market) and 42.1% are at high school level (which offer a general theoretical preparation needed to be followed by a specialisation level like post high school, technical specialisation or higher education).

But the more important aspect is that, even in the present, 41.9% of rural population has a low level of education (ISCED 0-2) and this situation is observable in all categories of age. Having this kind of educational structure, on the labour market the opportunities remain low. The rural population with low education are employed only as skilled agricultural, forestry and fishery workers based on experience or are used for various works (elementary occupations, services and other occupations) (Table 6).

Table 6. Employed and unemployed people structure by group of occupations and educational level

	%	ISCED					
		5	4	3	2	1	0
<b>Employed people</b>							
Managers	0.8	41.0	5.5	48.0	5.6	0.0	0.0
Professionals	3.1	72.2	8.1	19.3	0.3	0.2	0.0
Technicians and associate professionals	1.9	20.4	18.1	59.1	2.4	0.0	0.0
Clerical support workers	1.3	16.5	5.9	72.4	4.8	0.3	0.0
Service and sales workers	6.5	3.6	2.2	76.0	16.8	1.2	0.1
Skilled agricultural, forestry and fishery workers	42.9	0.7	0.6	38.8	48.1	11.2	0.6
Craft and related trades workers	10.2	0.8	0.9	82.9	14.5	0.8	0.2
Other categories of occupations	20.0	0.8	1.0	58.0	32.2	6.7	1.3
Elementary occupations	13.2	0.5	0.5	46.1	41.6	9.4	1.9
<b>Unemployed people</b>	-	5.3	1.2	58.0	29.0	5.2	1.3

Concerning the unemployed population, the majority of demand is characterized by people with ISCED 2-3 level of education, and 6.7% of people with higher education.

## CONCLUSIONS

Rural labour market in Romania after EU integration is characterized by a decrease of activity rate and an increase of unemployment. Also in rural areas we observe a continuous process of reduction in number of young people group in favour of the elderly people group with direct implications on the economic development. This process is important if we take into consideration that over 40% of elderly people live in rural areas.

The majority of labour was concentrated in 2012 in agriculture (58.2%), only 12.5% in industry and 29.3% in other sectors. Also from the rural population, 37.4% are employees, 33.6% are self-employed and 25.7% are unpaid family workers.

The active population is represented in proportion of 25.5% by qualified workers, 18.5% have a qualification for services sector (especially sellers) and 33.1% have another occupation (from which 66.5% are unqualified workers). The unskilled workers (without qualifications) are in proportion of 63.4% working in agriculture. Also, in the industry sector only 44.0% of workers are skilled workers and in the construction and services sectors the number of qualified workers is reaching 63.2% and respectively 56.6%.

Taking all these aspects into consideration and the fact that 41.9% of the rural population has a low level of education (maximum ISCED 2) we may conclude that all rural areas need policies of development of SME in non-agricultural sectors and more importantly training programs to increase the skills of population of working age.

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