

EVOLUTION OF ECONOMIC AND SOCIAL INDICATORS OF RURAL AREAS IN ROMANIA

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Abstract

In recent decades, rural areas have been facing numerous problems, such as an ageing population, lack of jobs, migration of young people, poor infrastructure which negatively affect the quality of life of rural inhabitants. The aim of the study is to observe the economic and social evolution of the Romanian countryside over the last 10 years, taking into account the disruptive phenomena that have occurred during this period. The study is based on a quantitative and qualitative analysis of data provided by the National Institute of Statistics. In both urban and rural areas, the population tends to decline. In the case of the urban population, there was a 4.09% decrease over the period analysed, from 10.9 million to 10.46 million inhabitants. In contrast, the rural population decreased by 4.57% during the period, from 9.3 million to 8.87 million. Among the main reasons for this decrease, we can mention the high mortality rate (high degree of ageing), but also the migration of the population to Western European countries, a phenomenon that was accentuated with Romania's accession to the European Union in 2007.

Key words: rural areas, demography, income, Romania

INTRODUCTION

The rural area as a whole represents the place where activities predominantly related to agriculture and animal husbandry are carried out and where the inhabitants of rural areas carry out various craft activities depending on the specific area in which they are located [1]. For Romania, rural areas are of particular importance in part because a significant percentage of the country's population lives in villages, but also because rural areas are the place where ancient traditions and customs are preserved, which gives a clear picture of the identity of the Romanian people [9, 12].

Our great Romanian poet, Lucian Blaga, said that "eternity was born in the village". This verse can be explained by the fact that the village is the Romanian countryside; is the place where man connects best with nature, with the specific flora and fauna of our country [4].

The connection between the urban environment and the countryside is still preserved in Romania, unlike in other

European countries, where rural spaces of great significance have been lost due to the expansion of urban areas, but also because most of the inhabitants of cities have lost touch with the countryside [3, 11].

In Romania, things are a little different, in that many city dwellers still have relatives 'in the country', still know the charm of the village and how the food they put on the table is produced.

In this context, the countryside is extremely important because without the work of people in the countryside, without preserving traditions and customs, our identity as a people would be lost [6].

The performance of the countryside remains linked to agricultural activity, which is the main preoccupation of the rural population. The performance of the agricultural sector since Romania's accession to the European Union (2007) has also been reflected in the development of the Romanian countryside. European funding programmes have contributed to the development of rural businesses and, in some cases, have allowed

the rescue of specific crafts that without European funding would have become a memory [2, 7].

The Romanian countryside has undergone many transformations, which can largely be linked to Romania's history. The rural area still needs support and European and national funding is extremely important to solve most of the problems faced by the rural environment [5, 10].

The aim of the study is to observe the economic and social evolution of the Romanian countryside over the last 10 years, taking into account the disruptive phenomena that have occurred during this period.

MATERIALS AND METHODS

The data used come from the National Institute of Statistics, accessed on 26.07.2022, and were analyzed quantitatively and qualitatively. They have been plotted to illustrate trends in the evolution of selected indicators, facilitating their understanding. At the same time, the main statistical indicators such as minimum, maximum, arithmetic mean. The annual rate, standard deviation, and coefficient of variation were analyzed. The coefficient of variation is the ratio of the standard deviation to the mean when the mean is different from 0 and is expressed as a percentage.

$$C.V. = \frac{\sigma}{\bar{x}} 100 \dots \dots \dots (1)$$

The standard deviation is expressed using the same unit of measurement as the values in the series under consideration and is a very precise indicator of the spread of the series.

$$\sigma = \sqrt{D} \text{ sau } \sigma = \sqrt{\frac{(x_1 - \bar{X})^2 + (x_2 - \bar{X})^2 + \dots + (x_n - \bar{X})^2}{n-1}} \dots \dots \dots (2)$$

The student test is a decision method that helps us to validate or invalidate a statistical hypothesis with a certain degree of certainty. The statistical test consists of obtaining an inference based on a selection of the population by testing a certain hypothesis. Often this hypothesis is a statement about the

value of the unknown population density parameter, for example, the population mean or dispersion.

RESULTS AND DISCUSSIONS

Economic factors

In Romania, agriculture specific activities such as: plant cultivation, animal husbandry, fish farming, beekeeping which are important sub-branches of agriculture significantly contributing to Gross Domestic Product (Figure 1).

An analysis of the share of agriculture, forestry and fisheries in GDP over the period 2011-2020 shows that there has been a downward trend throughout the period. In 2020, the agricultural sector contributed by 4.4% to GDP formation, while in 2011 the share of agriculture in the formation of GDP was 6.8%. It can be seen that, since 2015, the share of the agricultural sector in the formation of GDP has been below 5% until 2020 (Figure 1).

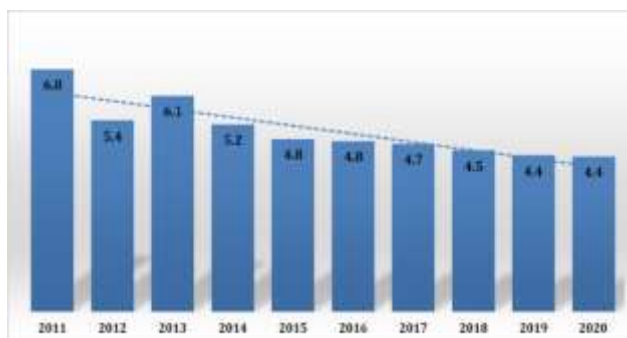


Fig. 1. Share of agriculture, forestry and fisheries in GDP, 2011-2020 (%)
 Source: NIS, 2022 [8].

At the national level, the income of inhabitants showed an increasing trend, so that if in 2011, the average income per person was 839.5 lei, in 2019 it was 1,852.7 lei/person, representing an increase of more than 120%.

It should be noted that in 2018 social contributions were transferred from the employer to the employee. Practically, the significant increase in 2018 compared to 2017 was artificial. Net salary was not influenced too much (Figure 2).

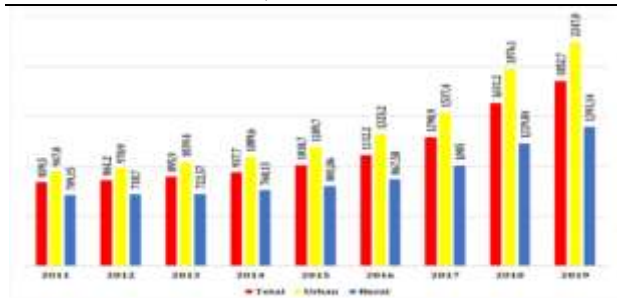


Fig. 2. Comparative analysis of the average monthly income, 2011-2019 (RON/person)
 Source: NIS, 2022 [8].

In Figure 3 the evolution of the average monthly income of the employees in the period 2011-2019 has been represented, showing a general upward trend in urban areas. The average income in 2019 compared to the reference year increased by 148.6%, while the average income in rural areas was 133.3%. Thus, indicating the income gap between the two residence environments.

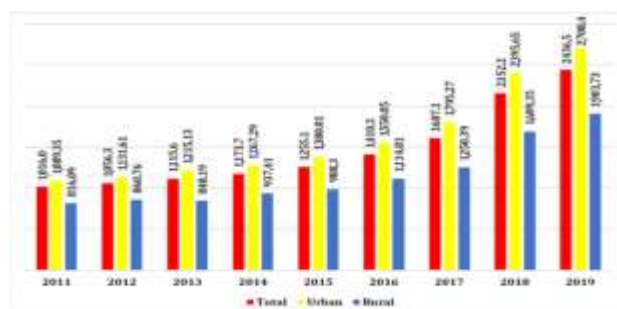


Fig. 3. Comparative analysis of the average monthly income of employees in the period 2011-2019 (RON / person)
 Source: NIS, 2022 [8].

These differences in income between the two residence environments can be attributed to existing jobs in urban areas compared to rural areas, which are predominantly concentrated towards low-paid activities. At the national level, the average income of employees increased by 140%. from 1,016 lei/person to 2,436.5 lei/person (Figure 3).

Taking into account the fact that in rural areas, the share of elderly people is significant, the evolution of their average monthly income was analyzed. Therefore, in rural areas, an increase of 66.7% was observed from 766.4 lei/person (2011) to 1,277.7 lei/person (2019), while in urban areas, the average income of pensioners

increased by 84%. from 844 lei/person (2011) to 1,626.7 lei/person (2019).

A significant difference was observed between the average income of pensioners between the two residence environments, explained by the fact that older people in rural areas worked in low-paid areas, such as agriculture (working in CAPs). Therefore, social contributions were much lower than for urban residents (Figure 4).

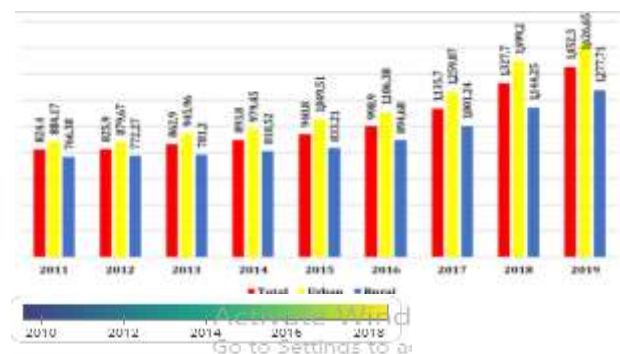


Fig. 4. Comparative analysis of the average monthly income of pensioners between 2011 and 2019 (lei/person)
 Source: NIS, 2022 [8].

Social Factors

Over the last 10 years, Romania's population has decreased significantly by 4.31%, so that while in 2011 Romania had 20.2 million inhabitants (residents), in 2020 it reached 19.33 million inhabitants (Figure 5).

Both in urban and rural areas registered a decrease of the population, so that in the case of the urban area the population declined by 4.09% in the analysed period, from 10.9 million inhabitants to 10.46 million inhabitants.

One of the main reasons for this decrease may be the high mortality rate (high degree of ageing), but also the migration of the population to Western European countries, once this was facilitated by Romania's accession to the European Union.

In the case of the rural population, there was a decrease of 4.57% in the period under review, from 9.3 million to 8.87 million inhabitants, caused by migration of the population to urban centers (Figure 5).

Analyzing the averages of urban and rural population for the period 2011-2020 using the Student Test method

We find that the two variables are statistically dependent. with a critical T distribution value of 22.7 (highly significant. probability 0.001***) (Table 1).

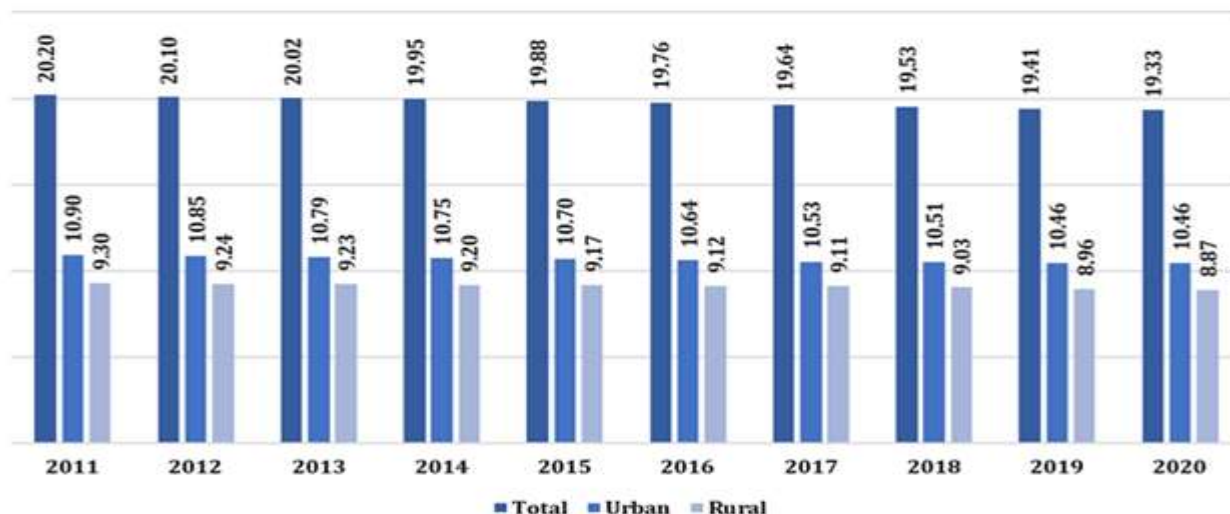


Fig. 5. Evolution of Romania's population by residence 2011-2020 (million inhabitants)
 Source: own processing based on WoS data.

Regarding the evolution of the rural population. It can be seen that all the development regions recorded population decreases, with the exception of the

Bucharest-Ilfov Region and the Western Region. In the case of the Bucharest-Ilfov region.

Table 1. Comparison of urban and rural population averages between 2011 and 2020 using Student Test method

Residential environments	N1	N2	M1	M2	GL	S1^2	S2^2	tcalc
Urban-rural	10	10	10.66	9.12	18	0.03	0.02	-22.7
The critical values of the distribution of T	Probab. 0.05		2.1	*	semnificant			
	Probab. 0.01		2.9	**	semnificant distinctive			
	Probab. 0.001		3.9	***	very semnificant			

Source: Own calculation.

There was an increase of the number of inhabitants by 19.44% during the period under analysis, which was determined by the

migration of the population from the urban area to the localities in the vicinity of Bucharest (Table 2).

Table 2. Analysis of the main statistical indicators on the rural population 2012-2020

Regions	Min	Max	Average	Annual rate	Standard deviation	Coeff. of variation
	millions of people	millions of people	millions of people	%	millions of people	%
TOTAL	8.87	9.24	9.10	-0.51	0.127	1.40
NORTHWEST	1.20	1.23	1.22	-0.26	0.008	0.68
CENTER	0.99	1.00	0.99	-0.06	0.003	0.31
NORTH-EAST	1.84	1.92	1.89	-0.54	0.028	1.50
SOUTH-EAST	1.11	1.18	1.15	-0.77	0.024	2.10
SOUTH MUNTENIA	1.75	1.89	1.83	-0.97	0.049	2.68
BUCUREȘTI ILFOV	0.22	0.27	0.25	2.24	0.016	6.36
SOUTH-WEST OLTENIA	1.02	1.11	1.07	-1.07	0.032	3.01
WEST	0.69	0.70	0.70	0.05	0.002	0.35

Source: NIS, 2022 [8].

Analysing the evolution of the population in Romania in the period 2011-2020, the population between 40 and 44 years (1.5 million inhabitants) was found to be concentrated in the age bracket, but their number decreased by 12% during the period analysed. It is worth noting the increase in the population aged 65-69 years (1.2 million inhabitants) of 34.7% over the period analysed, as well as the population over 85 years (403 thousand inhabitants) with an increase of 54.6% indicating an increase in life expectancy that can be attributed to the increase in the standard of living.

It should be noted that an increase in the number of inhabitants over 65 may have a negative effect.

Impact on the national budget if this number is not supported by an increase in the number of inhabitants in the active population.

CONCLUSIONS

In both urban and rural areas, the population tends to decline. The urban population decreased by 4.09% during the period under review, from 10.9 million to 10.46 million. In contrast,

rural population decreased by 4.57% during the period, from 9.3 million to 8.87 million. Among the main reasons for this decrease, we can mention the high mortality rate (high degree of ageing), but also the migration of the population to Western European countries, a phenomenon that was accentuated with Romania's accession to the European Union in 2007.

Regarding the evolution of the rural population, it is noted that all the development regions are experiencing population decreases, with the exception of the Bucharest-Ilfov Region and the Western Region. In the case of the Bucharest-Ilfov region, the number of inhabitants increased by 19.44% during the period under review, due to the migration of the population from the urban area to the localities in the vicinity of Bucharest. In 2020, Iasi County had the highest share of rural inhabitants, 4.7% of the total rural population, with 420.3 thousand inhabitants. Suceava and Prahova counties

also had a share of 4.2% and 4.1% respectively of the total rural population, with a population of 368.8 thousand inhabitants and 348.5 thousand inhabitants.

In the urban environment, the population aged between 40 and 44 years old has the highest number of inhabitants. In contrast to the urban environment, in the rural environment, there have been significant decreases, such as the young population, aged 0 to 4 years, and those aged 5 to 9 years, of 12.1% and 17.6% respectively. Both urban and rural areas show significant increases in income. Thus, the average monthly income in urban areas increased by 137.3%, from 947 lei/person to 2,247 lei/person, while in rural areas there was an increase of 96.5%, from 709.15 lei/person to 1,393.14 lei/person. The difference in income between the two residence environments is significant. The average wage income recorded in rural areas is 38% lower than in urban areas.

Comparing the average monthly incomes of farmers in the two regions in 2019 shows a significant difference. The average monthly income in the South-Muntenia region was 995.3 lei/person, while in the West region it was 1,366.9 lei/person, representing a difference of 27.2%. This difference can be attributed to the labour force working in the sector, correlated with the positioning of the western region, as they are more likely to migrate to countries close to the border because of higher wages (Hungary, Austria). It should be noted that the highest average monthly wage was recorded in the central region, which can be attributed to the shortage of labour in the region and the difficulty of manual work specific to the predominant crops in this area (potatoes).

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