

A TERRITORIAL ANALYSIS OF THE ECONOMICALLY ACTIVE POPULATION IN ROMANIA DURING 2000-2011

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Abstract: *The economically active population is part of the human potential of a country or a region and constitutes the available labour force involved in the production and provision of goods and services. The active population is one of the main production factors, but it is also accompanied by other, equally important factors: capital and nature. The economically active population can also be calculated as the sum encompassing the employed and the unemployed, and these conditions are sometimes hard to define, as the standards in this field are mainly related to the estimated degree of employment and even to the legitimacy of the activity being developed – if we take into account those individuals involved in the underground economy. A thorough outlook at the economically active population is conditioned by the analysis of the information related to the size and the structure of the active population in terms of several criteria, such as: age, residence, sex, level of education, national territorial units, etc. One of the criteria used for assessing the development level of a country is the occupational structure of the economically active population, i.e. the grouping of the active population in each of the three economic sectors: primary sector (agriculture, forestry, fishing and hunting), secondary sector (manufacturing and constructions) and the tertiary sector (services). The historical development of the size and structure of the economically active population is best revealed by an analysis of the time series that have alternated during the reference period 2000-2011, based on the information presented in the Labour Force Balance. The structuring of the active population by development region was based on the identification of the relative measurements of structure according to a number of social and economic characteristics. The analysis of the ratio of the economically active population to the total population as a general indicator needs to be accompanied by the analysis of the specific activity rates by group. Sustained development requires the involvement of all the policymakers in a joint effort to reduce the demographic decline that is affecting both our country and the other EU member states. This decline must be stopped by making investments in: health and science, as well as in labour force employment policies.*

Keywords: *economically active population, general activity rate, development regions, level of education.*

JEL classification: *J21*

1. Theoretical approaches of the economically active population

The economically active population, in terms of economic standards, comprises all individuals who furnish the supply of labour force (either employed or unemployed) for the production of goods and services during the time-reference period.

The civilian active population includes the potential supply of labour force and the status in employment of the population which covers both the employed and the unemployed individuals.

The economically active population of a country encompasses both the employed and the unemployed population. This active population is a subdivision of the total population, as the latter also encompasses dependent individuals consisting of young people, senior citizens and adults who are currently both unemployed and not seeking employment. (Bathelemy et al. 2009).

The UN methodology recommends two measures for the economically active population:

- the usually active population;
- the currently active population;

The first group is measured in relation to the employment in the production of goods and services during a reference time-period of one year, while the second is measured in relation to the employment in the production of goods and services during a short reference period of one week.

The economically active population includes the unemployed and the employed population, as can be seen in Figure 1.

The employed population, which includes individuals above a specified age and able to work who engage in economic or social activities in the production of goods and services for at least one hour during the time-reference period in return for remuneration as wages, salaries, pay in kind or other benefits.

The employed population includes civilian employees, employers, own-account workers, unpaid family workers, paid apprentices and residents, armed forces.

The unemployed economically active population includes unemployed persons.

According to the standards developed by the International Labour Organisation, the unemployed are defined as individuals aged 15 years or older who, during the specified time-reference period, meet all of the following criteria: have no paid employment and do not engage in activities in return for remuneration; are seeking employment, taking various steps to seek paid employment in a four week reference period; are available for work in the following 15 days, if employment becomes available.

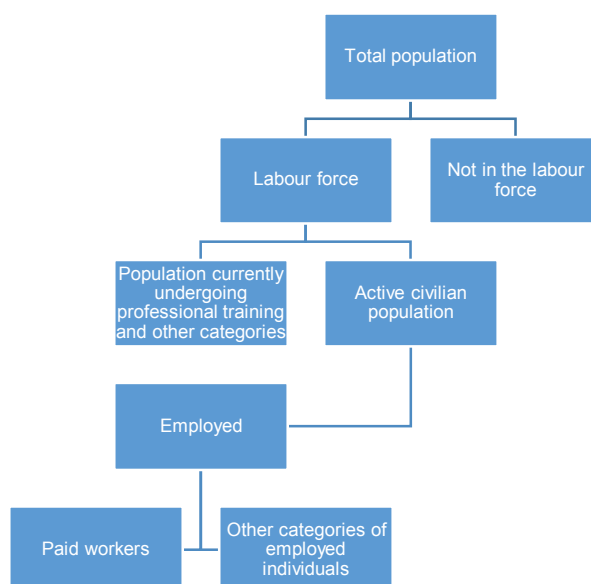


Figure 1: Population structure by status in employment

Source: developed by the authors

The measurement of the labour resources in Romania is based on two sources of information managed by the National Commission for Statistics: Household Labour Force Survey (AMIGO) and the Labour Force Balance. There are significant differences between the two sources, in terms of absolute employment rates. These differences are mainly caused by the different definitions given to the employed population in the two approaches.

In the AMIGO survey, the employed population includes persons aged 15 years and above, while the Labour Force Balance sets the lower limit to 16 years of age. The employed population in the latter case refers to civilian employed individuals. Moreover, the sources of information used by the two are different as well: the civilian active population is measured based on administrative data, while AMIGO measures the economically active population based on a quarterly selective research that bears a 3% margin of error.

The EU Labour Force Survey (EU LFS) is conducted quarterly at the EU level and provides essential data on the trends recorded on the labour market in the Union.

In order to have a comprehensive outlook on the economically active population and the labour force, the information related to the size of the labour force must be accompanied by the data related to the structure of the active population in terms of several criteria. (Ghiță, 2005).

The active population can be measured according to several criteria: age and sex groups, industry, national economic sectors, etc.

The analysis of the frequency distribution series for the economically active population by age group enables the measurement and interpretation of significant indicators, such as the average age of the economically active population.

An analysis by sex group allows the measurement of the ratio of men and women to the total active population, both for the overall domestic economy and for each industry.

The comparative analysis of the structure of the economically active population in countries with different economic development levels emphasizes the fact that developed countries have a higher ration of active population in the third sector and a low percentage of workers employed in the primary sector.

The structure of the economically active population by industry sectors allows the classification of the various sectors in the overall domestic economy in terms of ratios of active population employed in each.

In economic analyses and in international comparative studies, the economically active population is correlated with the total population or with certain segments of it, based on the activity rates (Sora, 2005).

- The crude activity rate is the ratio of the economically active population to the total population ;
- The activity rate by working age group is calculated as the ratio of the economically active population to the number of individuals within the working age range.
- The specific activity rates are calculated:

by sex

The male and the female economic activity rate is the ratio between the economically active male and, respectively, female population, to the total male and, respectively, female population.

The male economic activity rate is similar in various countries in the world, regardless of their level of economic development, as the male labour force need to be engaged in activities and perform some kind of work in social production. The female economic activity rate differs significantly among countries, as it is influenced by the demographic structure of the population, by the women's levels of education, by traditions, religion, etc.

by averages

The urban and, respectively, rural economic activity rate is calculated as the ratio of economically active individuals in the urban and, respectively, rural regions to the total population in urban and rural regions.

by age group

The activity rate at age "i" is the ratio of the active population aged "i" to the total population aged "i".

These rates enable the identification of the activity patterns that are the graphic depictions of the specific activity rates by age and sex group. Among these patterns, the activity rates of the marginal age groups (under 20 years of age and over 60) are particularly important, as they show, on the one hand, the effect of education, i.e. the "entry" into the economically active population, and, on the other hand, the effects of the work regulations and of the standard of living, i.e. the exits from the labour force (Mihăescu, 2001).

The activity rates of the population aged below 20 are quite low in developed countries, while the activity rates for the population aged over 60 are rather high. In less developed countries we'll find that the opposite is the case.

The activity rates of those aged between “20-24” in developed economies are decreasing both for men and women alike. The decreasing “spontaneous” education (optional education) largely accounts for the more or less delayed time of employment (Bathelemy et al. 2009).

2. Analysis of the economically active population in Romania

The civilian economically active population amounted to 8826,5 thousand individuals at the end of 2011, thus accounting for 41,33% of the total population of the country, of which 4645,5 thousand male (52,63%) and 4181 thousand female (47,37%).

Table 1: Economically active population by sex 2000-2011

Years	Total -thousand individuals-	Male -thousand individuals-	Female -thousand individuals-
2000	9636,4	4983,9	4652,5
2001	9389,4	4854,4	4535
2002	9089,6	4737,9	4351,7
2003	8964,4	4751	4213,4
2004	8796,2	4641,3	4154,9
2005	8913,4	4728,9	4184,5
2006	8929,8	4728,3	4201,5
2007	9093,7	4845,4	4248,3
2008	9150,4	4919,2	4231,2
2009	9120,1	4854	4266,1
2010	8998,3	4781,8	4216,5
2011	8826,5	4645,5	4181

Source: Labour Force Balance, INS - <https://statistici.insse.ro>

The economically active population decreased in 2000-2011, as a consequence of the decrease in the total population. As compared to the reference year 2000, the economically active population decreased in 2011 by 809,9 thousand individuals, thus accounting for a decrease of 8,38%. The male economically active population diminished in 2011 by 6,78% (338,4 thousand) as opposed to the year 2000, while the female economically active population diminished by 10,13% (471,5 thousand).

The increased share of the ageing population in the general population actually leads to an increased share of retired individuals. Moreover, the share of the ageing population also increases in the median aged working population, and, therefore, in relation to those who contribute to pension funds. The age dependency ratio thus declines and the increasing ageing of the population has negative consequences on the pension fund system.

The ageing process in those developed countries where the share of the older population has increased significantly has been accompanied by the lowering of the retirement age, the

shrinking of the weekly working hours and the annual reduction of the working schedule and increased vacations. Increased work productivity could allow for additional duties assigned to active individuals without affecting the standard of living (Rotariu, 2009). The economically active population by development region decreased between 2000-2010, while the Bucharest– Ilfov region was the only one that increased significantly during the specified time-reference period, as seen in Figure 2.

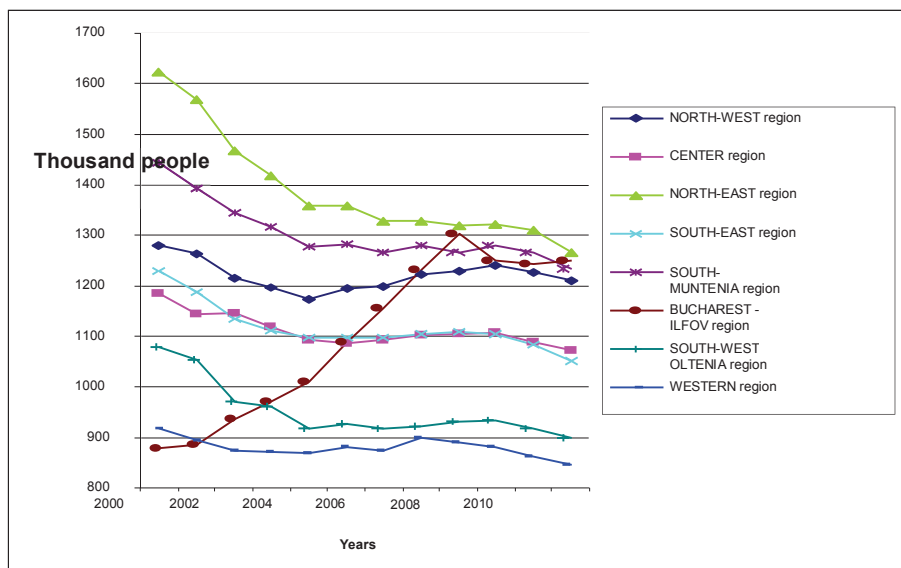


Figure 2: Changes in the civilian economically active population by development regions 2000-2011

Source: developed by the authors based on the information presented in the Household Labour Force Survey (AMIGO) 2000-2010

A comparison of the ratios of each region to the total economically active population on a domestic level in 2011 will show that the North-East region has the highest weight (14,34%) immediately followed by the Bucharest – Ilfov region (14,15%) and by the South Muntenia region (13,99%), as shown in Figure 3.

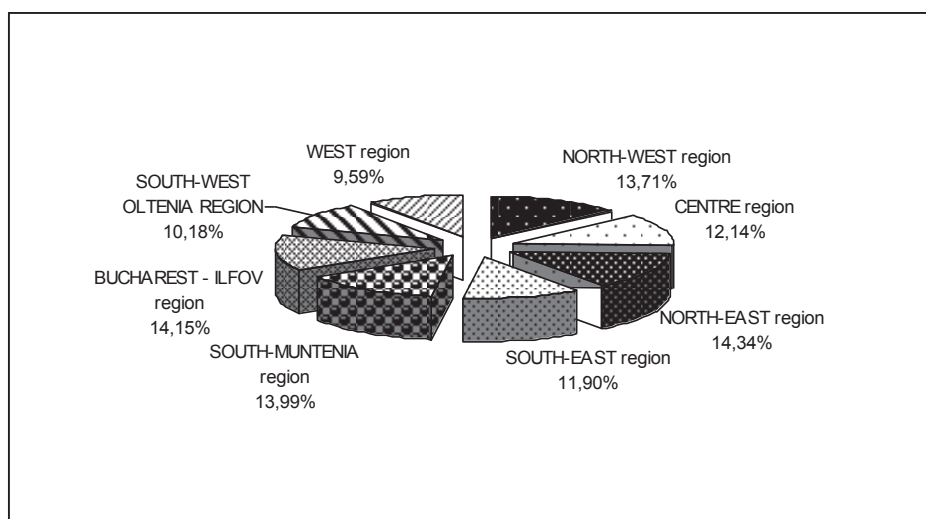


Figure 3: Structure of the economically active population by development region in 2011

Source: developed by the authors

The comparative analyses by development region require the calculation of the crude activity rates by identifying the ratio of the economically active population to the total population in the region. The activity rates of the population aged 15 and above by development region in 2000-2011 are shown in Table 2.

Table 2: Crude activity rate by development region during the time-reference period 2000-2011

Year	North-West	Centre	North-East	South-East	South-Muntenia	Bucharest-Ilfov	South-West Oltenia	Western region
2000	63,2	58	69,4	61,5	65,2	55,1	70,3	60,6
2001	63,7	57,1	68,4	59,4	64	52,5	70,7	58,5
2002	55,7	53,4	59,5	54,6	57	52,4	59,9	53,4
2003	54,1	51,8	58,4	53,7	55,5	51,8	58,9	52,3
2004	52,4	51	59,8	53,2	55,5	54	57,6	52,7
2005	52	50,5	58,6	51,7	55,1	53,4	57,2	51,5
2006	53,2	52,5	57,4	53,8	56,2	55,3	57,3	53,1
2007	52,3	51,5	58,3	52,3	56,8	54,6	56,6	53,9
2008	51,2	52,6	57,2	51,7	56,7	54,9	57,2	53,3
2009	50,9	52,3	57,8	51,6	56	55,6	57,1	52,8
2010	53,7	50,5	58,5	52,2	55,6	56,5	57	52,2
2011	53,6	49,6	59,4	51,5	52,4	57,4	57,2	52,5

Source: Household Labour Force Survey (AMIGO)

The study of the activity rates by age groups in Romania in 2000-2011, reveals a downward trend for all age groups, as shown by the data in Figure 4.

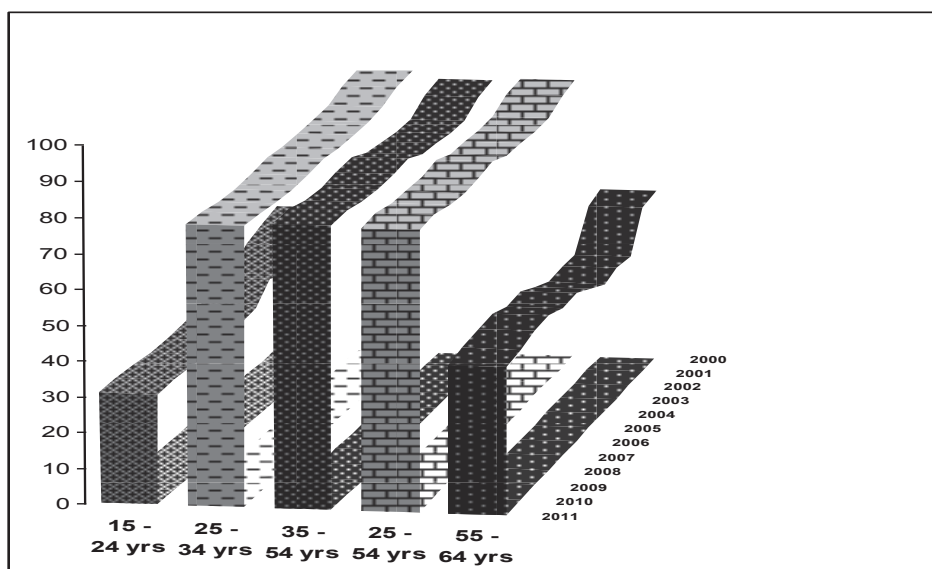


Figure 4: Activity rate by age groups in Romania in 2011

Source: developed by the authors based on the information provided in the Household Labour Force Survey (AMIGO) for the reference period 2000-2011

The size of the economically active population has been mainly affected by the massive decline in the number of working age individuals. One solution that society may have for at least partially covering the work force deficit is to increase the participation in economic activities of the economically inactive population (Ghețău, 2012).

The comparative data on the participation of the population in economic activities for the reference period 2010, reveal the considerable delay between Romania and the other EU countries, as shown in the centralised data in Table 3.

Table 3: Activity rates by sex and age groups in 2010

	Total 15-64 years	Male	Female	Age groups		
				15-24 years	25-54 years	55-64 years
EU	71	77,7	64,5	43,1	84,9	49,7
Romania	63,5	71,5	55,8	31,2	79,5	42,5

Source: European Commission, Labour Market Statistics, Eurostat, Luxembourg, 2011

The activity rates are lower in our country, both for the overall population and for each age group. The participation of the economically inactive population in the economic circuit entails the development of strategies directed at the professional training of the population according to the needs of the domestic market.

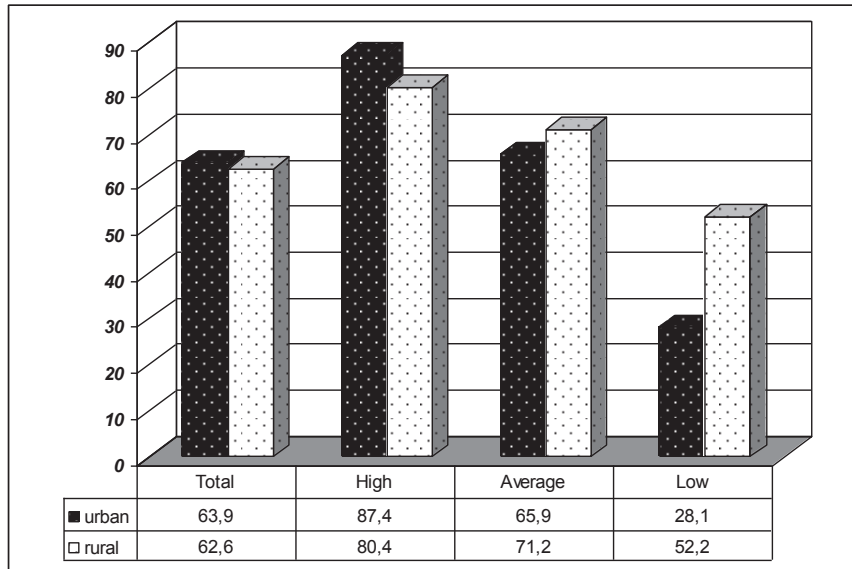


Figure 5: Activity rates by averages, according to level of education in 2011
 Source: developed by the authors based on the Household Labour Force Survey (AMIGO) - 2011

The young and young-adult segment of the working age population will undergo a significant decline in the following decades as a consequence of the reduced birth rates. Thus, the economically active young population will be reduced, while the education of this segment will entail specific requirements. The education system will have to develop particular training programmes that best meet the needs and requirements of the labour market (Ghețău, 2009).

The inclusion of young individuals who are currently undergoing higher education programmes is considerably lower in Romania as compared to other developed economies. The negative consequences of the declining number of young individuals on the young labour force could also be diminished by strategies and programmes directed at stimulating and encouraging the access to higher education in general and particularly that of children from rural areas or of those raised in economically deprived families.

3. Conclusions

The size of the economically active population has been mainly affected by the massive decline of the working age population. One solution that society may have in order to at least partially cover the work force deficit is to increase the participation in economic activities of the economically inactive population.

The economically active population accounts for the maximum or prospective employment available in a specific field but also for that part of the total population the inactive individuals depend on.

The total demographic dependency ratio of the inactive population shows that each active and employed individual accounts for a certain number of economically

dependent individuals, apart from accounting for their own needs. In the future, the weight of the dependency ratio will highly depend on the evolution of the productive efficiency and on the activity rates, as these may be alleviated for adults through the increased involvement of both women and senior citizens in economic activities.

An analysis of the evolution of the total dependency ratio could provide information on the distribution of the global income between active and dependent individuals, as it takes into account the evolution of all the categories of dependent individuals (dependent young people and adults).

The decline of the economically active population may have very serious consequences on the economy unless measures are taken for encouraging the participation in economic activities and the employment rate for all segments of the labour force. The rapid technological development, globalization and financial crises are factors that will also trigger the restructuring of economic activities.

The aging of the population also entails a series of challenges: for the labour market, for health systems and also for the quality of life after retirement.

The increased life expectancy in Europe will also extend the retirement age and will augment the fear of losing one's job or of the inability to find another job that would provide a decent retirement scheme. The various parties involved will need to make a joint effort and collaborate.

The decline of the economically active population will lead to a reversal of the economic dependence relationship, and this decrease will influence the crude activity rate.

The current migration of the labour force makes it difficult to forecast the changes that may occur in the economic activity rates. Consequently, a realistic opinion on the future economic and social development of Romania must definitely be formulated.

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