

Regional economic disparities in Romania

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Abstract: A major objective of the European economic policy is the balanced development of the economy of the European Union member states (EU). The adherence of Romania and Bulgaria to the European Union in 2007 led to the accentuation of disparities among the Europe's regions. The evaluation of regional economic disparities in Romania is needed for the identification of the main areas towards which should be directed investments in economy as well as structural and cohesion funds Romania has at its disposal after the adherence to the EU. Explaining the regional disparities and identifying the economic profile of the Romanian regions allow the set up of the coordinates of regional development policy according to the development potential of each region.

Key-Words: regional development, regional disparities, regional economic profile

1 Introduction

An important objective pursued through the signature of the Treaty of Rome (1957), of the European Single Act (1986) and, subsequently, of the Treaty of Maastricht (1993), was the insurance of a balanced development of the signatory countries' economies, aiming at reducing the differences among the regions of European countries.

A great number of scientific studies highlighted that, at European scale, a certain convergence has been reached, while disparities at regional level, especially after the adherence of the Central and East European countries, have gradually deepened (Jouen, 2001). Since 1973 the European Union member states have registered a convergence of incomes level, while at regional level, the differences between the rich and the poor regions have become more and more obvious (Morgan, 2001). „*A global convergence and a local divergence*” have been reached (Tarschys, 2003).

In Romania's case, the evaluation of regional economic disparities and the development potential of each area are needed for the use and efficient orientation of structural and cohesion funds provided after the 2007 adherence by the European Union. The highlighting of existing regional disparities will allow the identification of the main areas towards which economic investments should be directed, also considering the economic development potential of the country's regions.

The assessment of these disparities is also imposed by the new challenges of regional development policy generated by the change of the distribution model of geographical disparities: 25% of the EU population will live in regions with a 75% smaller GDP than the communitarian average, of which 60% will be represented by the population of the new member states (Ghizdeanu, 2010).

The present study makes an analysis of regional disparities in Romania, from the standpoint of the most important macroeconomic indicators: *Employment rate (%)*, *Activity Rate (%)*, *Regional GDP* (in million current prices), *Total income of main household categories* (lei, monthly per person), *Total expenditure of main household categories* (lei, monthly per person), *Unemployment rate (%)*. After the identification of regional economic disparities, we will highlight the major structural changes occurred during 1990-2008 from the perspective of the population occupied by economic activities. These structural changes which happened after the '90s as a consequence of the economic reforms adopted in Romania in order to pass to a system based on the market economy principles, have determined changes of the economic profile of the regions. In this paper, we will identify the current economic profile of each of the eight regions of Romania: North-West (*N-W*), Center (*Center*), North-East (*N-E*), South-East (*S-E*), South (*S*), Bucharest (*Bucharest*), South-West (*S-W*), West (*W*).

2 Methodological aspects

The identification of regional disparities is conducted by applying the methods of multivariate statistical analysis, the analysis of the principal components and the factorial analysis of correspondences. These descriptive methods of multidimensional data analysis aim at highlighting the correlations among variables and the resemblances, respectively the differences among the statistical units (Volle, 1997). The advantage of these methods is the synthetic graphical representation in a factorial axes system of statistical units and statistical variables. The factorial axes are linear combinations of statistical variables. To each factorial axis a part of the information contained in the initial data table is associated, also named explained variance (Bénczecri, 1992). The factorial axes are classified in a descending order according to their discriminatory power: the first factorial axis explains most of the total variance, highlighting thus the greatest differences among statistical units. Therefore, the interpretation of results will be undertaken for a reduced number of factorial axes (Everitt, Dunn, 2001).

The data we used include measures from official sources such as INSSE (The Romanian's Institute of Statistics). All the results were obtained using the SPSS 16.0 software.

3 Inter-regional economic disparities in Romania

In order to better distinguish the most important disparities among the eight Romanian regions, we registered *Regional Gross Domestic Product (GDP)* (in million current prices), in 2008. The graphical representation of the GDP distribution by regions is shown in the figure below:

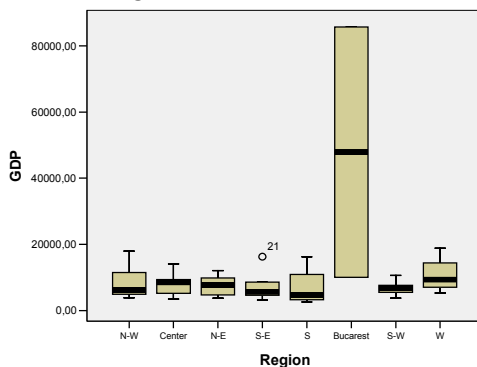


Figure 1. Regional (GDP) (in million current prices), in 2008, in Romania

The above represented box-plot diagrams highlight significant disparities between the Bucharest region, including the country's capital, on one hand, and all the other regions, on the other hand. The Bucharest region is characterized by the highest level of the GDP in comparison with the other regions on a whole. The significant differences between the GDP level registered for the Bucharest region and the other regions enable the follow up of the analysis at regional level, without considering this region.

In order to accentuate the inter-regional disparities in Romania according to the most important economic and social indicators in 2008, we registered the following variables: *Employment rate (%)*, *Activity Rate (%)*, *Regional GDP* (in million current prices), *Unemployment rate (%)*, *Total income of main household categories* (lei, monthly per person) and *Total expenditure of main household categories* (lei, monthly per person).

By applying the analysis of the principal components, the following results were obtained:

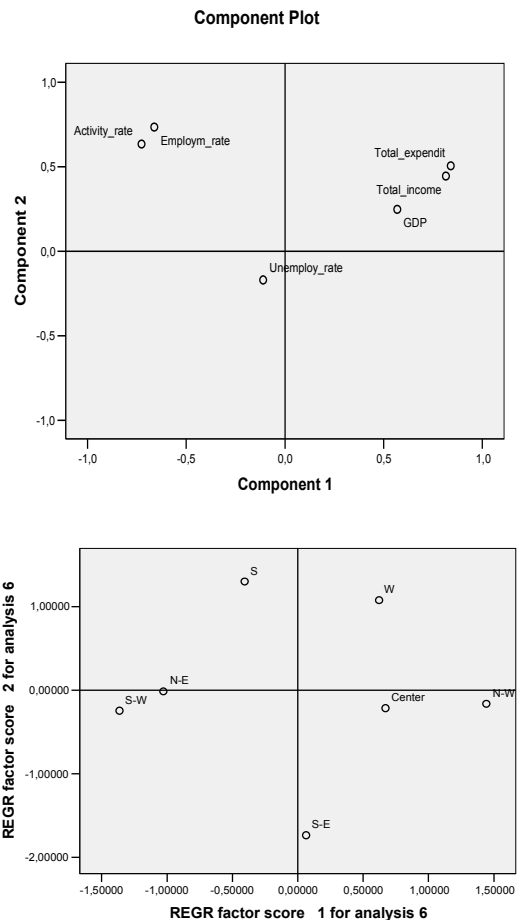


Figure 2. The graphical representation of the main economic and social indicators by regions in Romania, in 2008

As it can be observed, the most important economic indicators registered in Romania in 2008 indicate significant disparities among the country's regions.

The most important inter-regional disparities are highlighted by the first factorial axis, being horizontally represented. This shows a positive correlation between the indicators *Regional GDP*, *Total income of main household categories* and *Total expenditure of main household categories* on one hand, and between *Employment rate (%)* and *Activity rate (%)*, on the other hand. The representation of these groups of variables within different quadrants on the first factorial axis shows that between these two groups of variables there is a negative correlation.

The graphical representation of the regions within the two factorial axes allows the assessment of inter-regional disparities from the point of view of the economic indicators under consideration. The most important regional disparities in Romania in 2008 are registered between the North-West, West and Center regions, on one hand, and the North-East and South-West regions on the other hand. The regions belonging to the first group are characterized by a high level of the *GDP*, *Total income* and *Total expenditure* and a low level of *Employment rate* and *Activity rate*, unlike the regions of the second group. The first factorial axis appears as an axis of the economic development including a significant geographical component: the western and the central regions, also benefiting from their geographical position close to the western markets, are regions characterized by a higher economic development level, in comparison with the eastern and southern regions, which have a more reduced development level.

4 The dynamics of occupied population in Romania by activities of national economy during 1990-2008

In order to explain the inter-regional disparities in Romania, we analyzed the dynamics of the occupied population by the main activities of economy, agriculture (*Agr*), industry (*Ind*), constructions (*Constr*) and services (*Serv*), during 1990-2008. The graphical representation of the occupied population in Romania is as follows in Figure 3.

As it can be noticed, the structure of the population in Romania by economic activities has changed during 1990-2008. If in 2009 the occupied population in industry represented 37.25%, the

adoption of privatization measures of state enterprises caused the reduction of the occupied population in this field, reaching 21.95% in 2008. The reforms adopted in the '90s that stimulated the private sector development brought about the start up of private companies and the increase in the weight of occupied population in the service sector, from 27.76% in 1990, to 42.62% in 2008.

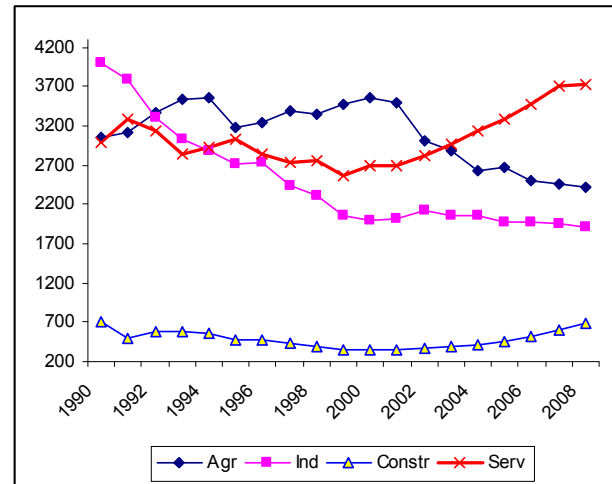


Figure 3. The dynamics of civil employment by activity of national economy in Romania, during 1990-2008 (thousands of persons)

The weight of occupied population in agriculture, despite the variations registered during 1990-2008, remained at a very high level, of 27.65% in 2008. The construction sector has known an accentuated growth dynamics, especially after 2000, but it was also the most affected sector by the economic crisis in 2009, when in Romania, the GDP had a decrease by 7.1%, in 2009, following a 7.3% increase in 2008.

5 The economic profile by regions in Romania in 2008

In order to identify the economic profile of the Romanian regions, we registered the occupied population by activities of national economy, agriculture (*Agr*), industry (*Ind*), constructions (*Constr*) and services (*Serv*), in 2008. Following the application of the factorial analysis of correspondences, we obtained the following results:

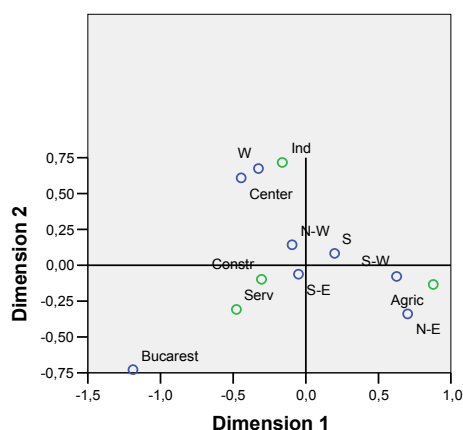


Figure 4. *The civil employment representation by activity of national economy by regions of Romania, in 2008 (thousands of persons)*

The diagram presented in the figure above allows the identification of the economic profile of the regions in Romania, by interpreting the associations between regions and activity field.

Thus, it can be noticed that the North-East, South-West and, to a smaller extent, the South regions are prevalently agricultural regions. In these regions, the weight of occupied population in agriculture was in 2008 of 47.7%, 44.9%, and 33.2% respectively.

In the Bucharest region the population occupied in the service sector is prevalent: 71.6% of the total occupied population in this region worked in the social and trade service sector. Having the same significant profile in services, but to a smaller extent, we could mention the North-West and South-East regions, with weights of 40.5% and 40.7% respectively.

The West and Center regions are prevalently industrial regions, with 36.3% and respectively 35.4% of the population occupied in this field.

As it can be observed, three of the eight regions of Romania (North-East, South-West and South) rely on agriculture from the point of view of population occupation. These regions are also those with the most reduced level of economic development, which is characterised by the smallest values of the *GDP*, *Total income* and *Total expenditure*, but with a very high occupation potential: the North-East region contributes with 17.87% to the total country's occupation in 2008 and the South region with 15.84%.

6 Conclusions

The balanced economic development of the EU member states represents a major objective of the European economic policy. Romania's adherence to

the EU in 2007 led to more significant regional economic disparities.

The evaluation of the disparities existing among the eight regions of Romania and the identification of the economic factors explaining these differences are needed to exploit the development potential of each region and the direction of structural funds towards the fields that may ensure a sustainable development of the country's regions.

The statistical analysis took into consideration the most important socio-economic indicators highlighted the existence of some significant economic disparities among Romania's regions, with a significant geographical component: the economic development was accentuated from west to east. The favourable geographical position of western and central regions determined the stimulation of investments in these regions, in fields specific to the market economy (constructions and services) and, implicitly, the increase in the GDP and population's incomes. The eastern and southern regions being prevalently agricultural have a reduced level of economic development, but a very high occupation potential.

When implementing the regional development policies one should consider the development potential of each region, by means of the stimulation of competitive capacity of the regions and of the processes of European integration.

Acknowledgements:

The present paper has benefited from the financial support of the project "Post-doctoral studies in Economics: lifelong training project of outstanding researchers – SPODE", financing contract no. POSDRU/89/1.5/S/61755, project financed by the European Social Fund through the Sectorial Operational Programme Development of Human Resources 2007-2013.

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