# COMPARATIVE ANALYSIS OF THE GEOGRAPHICAL DISPARITIES REGARDING THE LEVEL OF EDUCATION OF THE POPULATION AND THE LEVEL OF ECONOMIC DEVELOPMENT IN ROMANIA AND IN THE REGIONAL PROFILE

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**Abstract**
*Throughout this paper we undertook a research which goal is presented by the title, namely to elaborate a comparative analysis of the geographical disparities regarding the level of education of the population and the level of economic development in Romania and in the regional profile. Within the first sections of the paper we present the general coordinates of the framework components: regional economic and education level disparities. The problem of regional disparities has managed to become the most important economic policy in different regions of the EU, in the last two decades. Carrying out these general analyses of the territories in this geographical zone began, especially, after Greece, Spain, Portugal and then Romania joined the EU, states marked by significant regional imbalances, characterized by a low level of development in comparison with the other countries of the EU. Because in the developed countries, the structure of the economy is considered to be a basic condition, which must be taken into account in the process of economic development, we used these variables in order to evaluate the level of regional development and to understand the differences regarding the development between regions. The third section of the paper is presenting the comparative analyses of disparities regarding education in regional context in Romania.*
*The analysis at the regional level of the employment of less educated people compresses important aspects regarding the regional discrepancies in the economic welfare. Concretely, the analysis of the education in Romania comprises aspects, on the regional plan on the basis of the most representative indicators: the level of education of the population, the participation of adult population in lifelong learning, and the Gross Domestic Product per inhabitant, on a time horizon of 14 years, 2000-2014, by achieving correlations and statistical interpretations. The conclusions reflect that there are very big differences between the Bucharest-Ilfov region and the other regions of the country. Also the final ideas of the paper point out the serious problems the regional development confronts, by identifying these determining factors, they can be corrected more easily by implying massive efforts on a long time span.*

**Key words:** *regional economic development, regional disparities, regions, levels of education, lifelong learning*

**JEL Classification:** *I25, I24, R10, P48*

## I. INTRODUCTION

*The causes of geographical disparities* were anlysed in most theories of regional sciences, which tried to offer answers to the question why some regions are distinguished by a faster development than others. The explanations are numerous and were in accordance with the reference period. Treiman and Yip (1989), in a comparative study made in 21 countries found that education was a strong determiner of the occupational statute in the more industrialized countries. Especially, in the last two decades, the analysis of regional disparities has become really important, this being visible, especially, in the increase of the number of empirical studies regarding the convergence (Rey S., Janikas M. 2005). Analysts, theorists and practitioners equally used the concept of disparity (discrepancy, inequality, imbalance) to express the differences identified with the help of some appropriate mathematical techniques, using specific indicators. Throughout the last years, a so-called "geographical economy" has developed, based on the spatial crowd of industries and the long-term convergence of regional incomes. Trailblazers in this direction were Paul Krugman, Michael Porter, Robert Barro and W. Brian Arthur. Thus, subjects which initially were interesting for economists and geographers, are now investigated by sociologists, politologists and researchers from other subareas of social sciences. This increased interest from the part of researchers from different fields is due, mostly, to the recognition that „space matters", namely, the processes which generate, at the national level, innovation and economic growth are esentially related to space. The main fields aimed at by the regional policy are: business development, labor market,

investments, technology transfer, small and medium enterprises sector, infrastructure, environment, rural development, education, health and culture. Education and specialization of the workforce are key factors that change very fast nowadays and have a major impact on the social-economic development.

In Romania, *the regions of development* represent „zones that correspond to some groups of counties, constituted by their voluntary association on the basis of convention...the regions constitute the framework of conception, implementation and evaluation of policies of regional develompent and collecting the specific statistical data, according to the European regulations issued by Eurostat for the second level of territorial classification, NUTS II, in the European Union".

The context of the analysis of economic disparities, for Romania, is given by the presence of the eight regions of development (statistical regions) created after joining the European Union. At the constitution of the eight regions created according to the Law of regional development, it was taken into account: the criterion of the complementarity of resources, of the economic, social activity, of the functional connections. The European Commission report, entitled *Pay attention to differences - the education inequality across the EU regions*, points out the existence of some important differences between the EU regions, regarding the reached level of education.

The report is based on the data from Eurostat and contains more than 100 maps which allow the visualization of the regional disparities. The most important findings of the report are:

- the regional disparities in the field of education prevent the economic growth and balanced regional development;
- the regional disparitites in the field of education generate inequalities between the EU regions;
- the nature, the extent and the effects of the educational inequalities vary considerably between the EU regions;
- the efficient use of the European structural funds may help reduce the regional disparities in the field of education and their effects;
- a more systematic collection of data at the sub-regional level is necessary to improve the basis of knowledge and to inform the political responsible regarding this subject.

## II. THE SITUATION OF ROMANIA REGARDING THE LEVEL OF EDUCATION OF THE POPULATION IN THE EUROPEAN CONTEXT

### *II.1. The weighting of population with a low level of education*

According to the available data on the site of the European Commission for the period 2000-2014, one can observe at the level of the European Union a tendency of decrease of weighting of persons who promoted at most a preschool, primary and middle-school form of education in the total population between the ages 25 to 64. In Romania, the weighting of population with a low level of education decreased from 30.7%, in the year 2000, to 24.3% in the year 2014, according to figure 1.

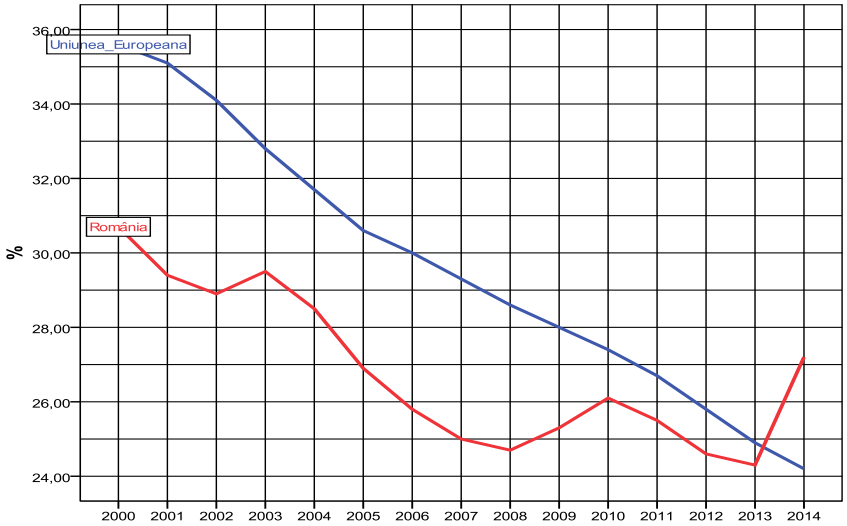


**Figure no. 1 Weighting of population between the ages 25 - 64 with a low level of education in Romania and the European Union, within the period 2000-2014**
*Source: personal elaboration according to the available data on Eurostat, 2014*

In the year 2014, one can observe a certain increase of weighting of population with a low level of education in the total population between the ages of 25-64. The increase is significant enough, but the values

registered in the European statistics are not final, which supposes an interpretation with precaution of the changes intervened in the year 2014 in comparison with the year 2013.

One can find a tendency of reduction of the difference between Romania and the European Union, regarding the weighting of population that has a low level of education. The biggest difference between Romania and the EU of 5.7% was registered in the year 2001, and the smallest difference in the year 2013, of 0.6%. The economic crisis started in the year 2008 is visible on the graph by the increase in Romania of the weighting of population with a low level of education. The decrease of the level of the incomes of the population determined, on one hand, the postponement of the achievement of studies, and on the other hand, the encouragement of the school drop-out. This attitude determined an increase of the weighting of population with a low level of education in the total of population between the ages of 25-64, according to *Figure no.1* .

According to the Report of the European Commission, entitled *Pay attention to differences- education inequality across the EU regions*, the regions with the biggest weighting of persons that promoted at most one preschool, primary and middle-school form of education (levels 0-2, ISCED 2011) as a percentage from the population over the age of 15, are generally in Portugal and Spain, according to table no.1. The Alentejo Region in Portugal has the biggest weightings of persons with a low level of qualification.

**Table no. 1 The weighting of persons that promoted at most a preschool, primary and middle-school form of education**

| REGION | WEIGHTING |
|---|---|
| Alentejo (PT) | 78,4 |
| Centro (PT) | 78,2 |
| Norte (PT) | 77,7 |
| Malta (MT) | 74,2 |
| Algarve (PT) | 71,7 |
| Extremadura (ES) | 67,4 |
| Ciudad Autónoma de Melilla (ES) | 65,0 |
| Castilla-La Mancha (ES) | 64,8 |
| Lisboa (PT) | 64,5 |
| Ionia Nissia (EL) | 64,1 |

*Source: Mind the Gap - education inequality across EU regions, http://europa.eu/rapid/press-release_IP-12-960_ro.htm*

### *II.2. Weighting of population with a high level of education*

The changes intervened in the structure of population according to the level of education are evident also through the analysis of the weighting of population that has a high level of education (levels ISCED5,6,7,8). In this respect, the comparative analysis of the evolution of the weighting of population with a high level of education in Romania and the European Union, within the period 2000-2014, points out the changes intervened in the structure of population. The weighting of population with a high level of education knew an ascending tendency throughout the whole period comprised in the analysis, as one can see in *Figure no.2.*

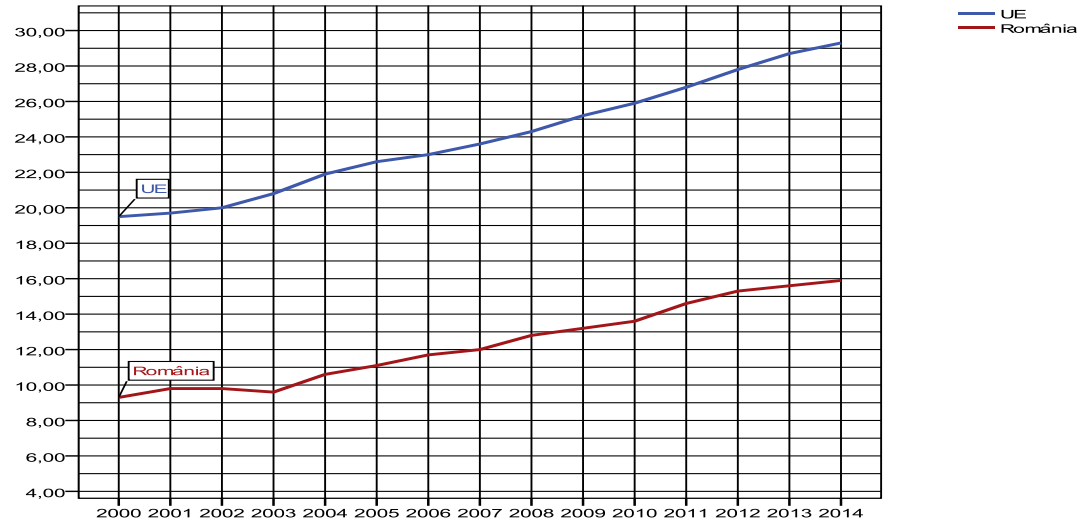


**Figure no. 2. Weighting of population between the ages of 25-64 with a high level of education in Romania and the European Union, within the period 2000-2014**

*Source: personal elaboration on the basis of data http://ec.europa.eu/eurostat/data/databas*

In Romania, the weighting of population with a high level of education increased from 9.3% in the year 2000, to 15.9%, in the year 2014. The evolution registered in Romania is similar to that found at the level of the European Union from 19.5% in the year 2000 to 29.3 % in the year 2014. Nevertheless, the existing differences between Romania and the European Union regarding the weighting of population with a high level of education continued to increase. If in the year 2001 the difference was of 9.9%, in the year 2014, the difference reached 13.4% in the detriment of Romania. This widening of differences between Romania and the European Union can be explained by the lower level of incomes of the population that can be appropriated to the increase of the level of education, and the difficulties regarding the access of rural population to education. Another explanation is that many young people can't pass the middle school graduation exam and the high school graduation exam. The more and more reduced number of high school graduates, the serious competition made by the faculties outside Romania, and the financial difficulties that students have contribute to this ecart between the European Union and Romania.

On regions of development, at the level of the European Union, according to the same report *Pay attention to differences-education inequality acrosos the EU regions*, that we referred to previously, the regions with the biggest weighting of persons with a qualification obtained in a university (levels 5-6, ISCED 2011) as a percentage from the total of persons with ages of 15 and over, are repesented in *Table no. 2*:

**Table no.2. Weighting of persons with a qualification obtained in a university**

| REGION | WEIGHTING |
|---|---|
| Inner London (UK) | 41,8 |
| Prov. Brabant Wallon (BE) | 38,1 |
| Stockholm (SE) | 34,5 |
| País Vasco (ES) | 34,3 |
| Prov. Vlaams-Brabant (BE) | 34,1 |
| Utrecht (NL) | 34,1 |
| Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest (BE) | 33,9 |
| Île de France (FR) | 33,0 |
| Noord-Holland (NL) | 32,8 |
| Hovedstaden (DK) | 32,3 |

*Source: Mind the Gap - education inequality across EU regions, http://europa.eu/rapid/press-release_IP-12-960_ro.htm*

The regions with the biggest weighting of persons with a university degree are, mostly, in the United Kingdom of Great Britain, in Belgium, in France and Denmark.

### *II.3. Participation of adults in lifelong learning*

An indicator which points out the increase of the level of education of the population in order to adapt to the changes intervened on the labor market is the participation of adults in lifelong learning. In Romania, only 1.5% of the population between the ages of 25-64 participated in activities of education and training, in the year 2014. Although, increasing in comparison with the year 2000, the weighting of population that participates in activitites of education and training is very reduced in comparison with that registered at the level of the European Union (10.7%). The differences between Romania and the European Union are increasing, from 6.3% in the year 2000, to 9.2%, in the year 2014, as one can see in *Figure no. 3*.

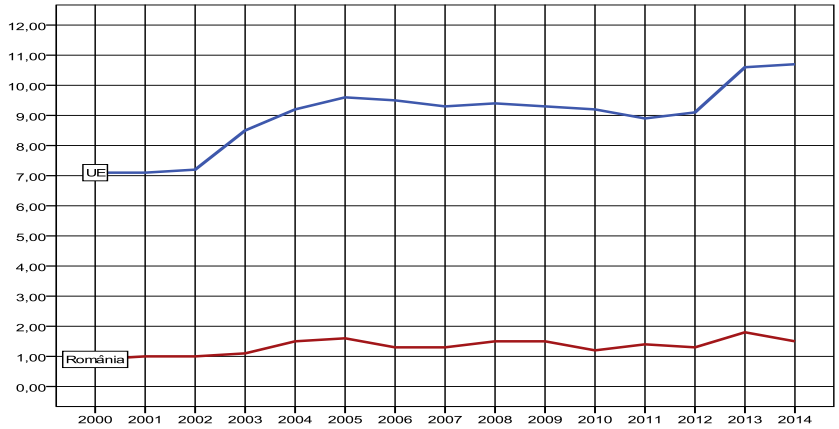


**Figure no. 3 Participation of adults between the ages of 25 - 64 in activities of education and training within the period 2000-2014**

*Source: personal elaboration on the basis of data http://ec.europa.eu/eurostat/data/database*

On regions of the European Union, we can see that the regions with the biggest participation of adults between the ages of 25-64 in activities of education and training (as % from the total population), in the year 2014, are in Switzerland, Denmark and Sweden.

**Table no. 3 Participation of adults between the ages of 25 - 64 in activities of education and training in the year 2014.**

| REGION | 2014 |
|---|---|
| Zürich (Switzerland) | 35,9 |
| Hovedstaden (Denmark) | 35,8 |
| Nordwestschweiz (Switzerland) | 33,5 |
| Zentralschweiz(Switzerland) | 33,1 |
| Denmark (Denmark) | 31,7 |
| Switzerland(Switzerland) | 31,7 |
| Schweiz/Suisse/Svizzera( Switherland) | 31,7 |
| Stockholm (Sweden) | 31,5 |
| Midtjylland(Denmark) | 31,1 |
| Espace Mittelland(Switzerland) | 31,1 |

*Source: author processing on the basis of data http://ec.europa.eu/eurostat/data/database*

The significant participation of adults from countries like Switzerland, Denmark and Sweden in activities of education and training is justified by the fact that these countries successfully implemented the idea of lifelong learning. Occupying the first places in the classification of reports with value of *benchmarking*, these countries demonstrate that the investments in education and in the professional development increase the performance and the competitiveness within the global economy. Getting high standards of education and a quality training in all sectors contributes to the increase of the chance to be employed, of the mobility in a society in continuing change.

Regarding the regions with the lowest participation of adults between the ages of 25 - 64 in the activities of education and training (as % from the total population), one can see that most of them are in Romania, Bulgaria and Greece.

**Table no. 4. Participation of adults between the ages of 25 - 64 in activities of education and training, in the year 2014**

| REGION | 2014 |
|---|---|
| Severna i yugoiztochna Bulgaria (BG) | 1,1 |
| Peloponnisos (NUTS 2010) | 1,1 |
| Severen tsentralen(BG) | 1,0 |
| Yugoiztochen(BG) | 1,0 |
| North-West (Romania) | 0,9 |
| Macroregion one (Romania) | 0,8 |
| West (Romania) | 0,8 |
| Center (Romania) | 0,7 |
| Macroregion four (Romania) | 0,7 |
| South- West Oltenia (Romania) | 0,7 |

*Source: personal processing on the basis of data http://ec.europa.eu/eurostat/data/database*

Small rates of participation of adults in activities of education and training in regions from Romania, Bulgaria or Greece are determined by the difficult situation in which these countries have been in the last years. These countries have also the smallest percentages from GDP appropriated to education, being in the last third of the EU countries, according to the statistics of the world reports at the level of the year 2014-2015.

## III. COMPARATIVE ANALYSES OF DISPARITIES REGARDING EDUCATION IN REGIONAL CONTEXT

The distribution on regions of development at the level of Romania of the population with a low level of education points out that, in the year 2014 the smallest weigthing (14.55%) was in the most developed region of the country, namely, Bucharest-Ilfov. If in the year 2000, the region with the biggest weighting of persons with a low level of education was in the North-East region, in the year 2014 the region on the first place at this indicator is South-East, with 32.8%. The first place of the South-East region regarding the weighting of population with a low level of education can be explained by the fact that this zone has the lowest rate of employment. The lack of jobs and the non attractive salary demotivate the population to increase the level of education. Moreover, the lack of infrastructure determines the limitation of the participation of young people in education, because of the inaccessibility. The industrial restructuring, the discontinuity in the territory of the industrial activities and the lack of correlation with the tertiary and agriculture activities probably represent other factors that determined the decrease of interest to continue the studies.

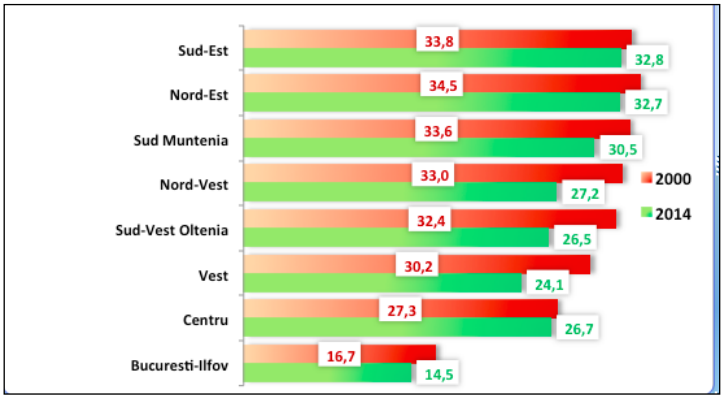


**Figure no. 4. Weighting of population between the ages of 25-64 with a low level of education on regions of development, in the year 2014 in comparison with the year 2000**

*Source: personal elaboration on the basis of data eurostat*

The comparison made on regions of development for the year 2014, in comparison with the year 2000, reveals, according to *Figure no. 4*, a clear tendency of decrease of the weighting of population with a low level of education for all the regions of the country. Following the analysis, we can state that higher weightings regarding the population with a low level of education are in less developed regions, while lower weightings are in regions with an increased level of development.

The graphic representation on regions from Romania, in the year 2014 in comparison with the year 2000, shows that the biggest weighting of graduates with a high level of education is the Bucharest-Ilfov region (35%), and the smallest weighting is in the South-Muntenia region (11.4%). The biggest increase of the weighting of population with a high level of education, within 2000-2014, was registered in the Bucharest-Ilfov region, as one can see in *Figure no. 5*.

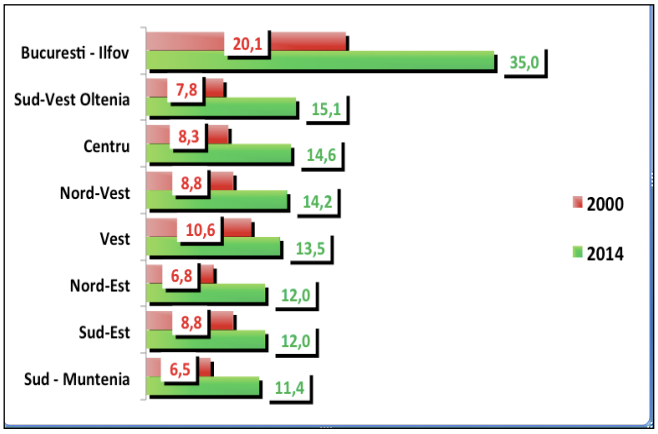


**Figure no. 5 Weighting of population between the ages of 25-64 with a high level of education on regions of development, in the year 2014 in comparison with the year 2000**

*Source: personal elaboration on the basis of data http://ec.europa.eu/eurostat/data/database*

The Bucharest-Ilfov region is distinguished by a demand of highly qualified worforce, which motivates the population to increase the level of education. The opportunities offered by the capital are numerous: the city standard of living, the prestige, the universities, the social and professional structure, confer the Bucharest-Ilfov region a force and an economic dynamics superior to other regions. The region is distinguished by a very high GDP/ inhabitant in comparison with the other regions. The directly attracted foreign investments represent 75% from the total of foreign investments at the national level. The Bucharest-Ilfov region is distinguished from the other regions of the country by the high density of small and middle entreprises, being national leader regarding the capacity of innovation and the IT field.

One can find very big discrepancies between the Bucharest-Ilfov region and the other regions. At the level of the year 2014, only 12% from the population between the ages of 25-64 from the North-East region and South-East region have a university degree. Within the South-East region, bigger weightings regarding the population with a high level of education are mostly in Constanța and Galați counties, where there are a series of economic agents that carry out activities in the field of tourism or connected and which require the personnel when employed a certain professional education.

In the North-East region, the migrating movement of the population has been big enough in the last years, the workforce had to become more mobile on the background of financial difficulties. Within this region,

Botoșani and Vaslui counties are on the last places in the national hierarchy of the GDP per capita. More than 80% of the expenses with the research-development activities within the region are concentrated in Iași county.

The North-East region became more attractive for possible investors because in most part of the region, the qualified workforce is cheaper in comparison with the other regions of the country. The main employer, in most localities in the region, is public not private.

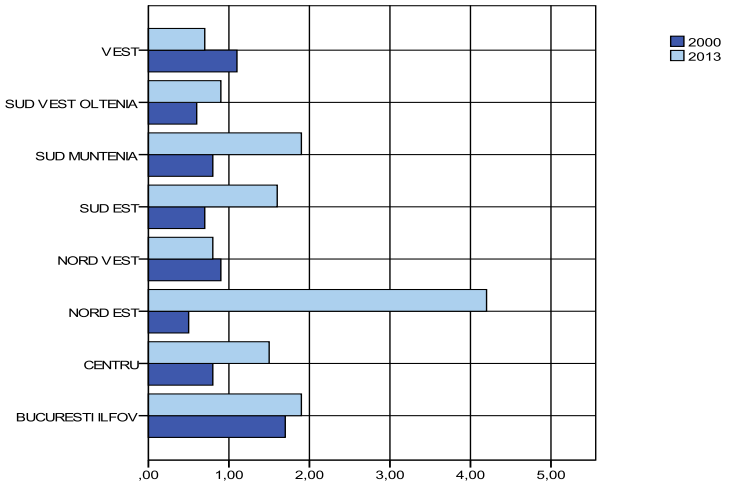


**Figure no. 6. Participation of adults between the ages of 25 - 64 in the activities of education and training on regions of development**

*Source: personal elaboration*

In the year 2013, the West region of Romania had the lowest weighting of adults between the ages of 25-64 that participated in activities of education and training (0.7%), while the North-East region registered the highest weighting of adults that participated in activities of education and training (4.2%). We observe, according to *Figure no. 6* that in the Bucharest-Ilfov region only 1.9% of the adult population between the ages of 25-64 participated in activities of education and training, the same weighting being in the South-Muntenia region.

There are possible explanations for these differences registered between the regions of development. Thus, the regions with a low level of development included the unemployed population in activities of education and training through projects carried out through the European funds. The rate of participation in the continuing training registers the biggest score in the North-East region because around half of the companies in the region had at least three employees that participated in at least one training course. On counties, the highest weighting was registered in Bacău, Botoșani and Neamț. At the region level, the lack of specialized persons in technical fields represented another reason to increase the participation of adults in activities of education and training.

## IV. CORRELATION BETWEEN THE LEVEL OF EDUCATION AND THE DEGREE OF ECONOMIC DEVELOPMENT IN REGIONAL PROFILE

A zone with a population with a low degree of education constitutes an impediment in the economic development of that zone, as a low level of development cannot assure the necessary resources to increase the level of education. The representation in the same system of axes of the pairs of numbers corresponding to the *Weighting of population with a university degree and the Gross Domestic Product per inhabitant* in the seven regions of development of the country pointed out a strong correlation of values.

Under the conditions of the elimination of the values corresponding to the Bucharest-Ilfov region, which represent extremely high values in comparison with the other regions of development of the country, we observe the correlation of the pairs of values corresponding to the two variables represented by the correlogram from *Figure no.7.*

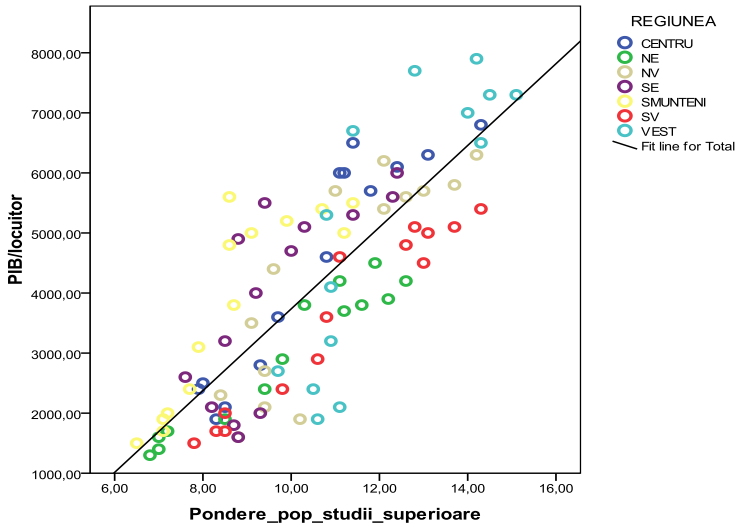


**Figure no. 7 The relationship between the GDP/ inhabitant and the weighting of population with a high level of education, on regions of development, without the Bucharest-Ilfov region, within the period 2000-2013**

*Source: personal elaboration on the baiss of the analysis in the program SPSS v.22*

Thus, we observe, that a high Weighting of population with a university degree is correlated with a bigger Gross Domestic Product per inhabitant, while a low Weighting of population with a university degree is found in a region with a low Gross Domestic Product. There is a direct connection between the analysed variables.

In order to determine the intensity of the connection between the Weighting of population with a university degree and the Gross Domestic Product per inhabitant, we applied the Pearson correlation coefficient.

**Table no. 5 The Correlation between the GDP/ inhabitant and the weighting of population with a university degree**

| | | GDP/inhabitant | Weighting of population with a university degree |
|---|---|---|---|
| GDP/ inhabitant | Pearson Correlation | 1 | 0,808** |
| | Sig. (2-tailed) | | 0,000 |
| | N | 98 | 98 |
| Weighting of population with a university degree | Pearson Correlation | 0,808** | 1 |
| | Sig. (2-tailed) | 0,000 | |
| | N | 98 | 98 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

*Source: personal elaboration on the basis of the analysis in the program SPSS v.22*

Following the application of the Pearson correlation coefficient, a value of 0.808 was obtained, significant from a statistical point of view. The coefficient shows us that there is a direct and very strong correlation between the *Gross Domestic Product per inhabitant* and the *Weighting of population with a university degree.*

The representation in the same system of axes of the pairs of numbers corresponding to the *weighting of population with a low level of education* and the *Gross Domestic Product per inhabitant* between the analysed variables at the level of the seven regions of development, for the period 2000-2013, there is an indirect connection.

Under the conditions of the elimination of the values corresponding to the Bucharest-Ilfov region, which represents extremely high values in comparison with the other regions of development of the country, one can see the correlation of the pairs of values corresponding to the two variables represented by the correlogram in *Figure no. 8.*

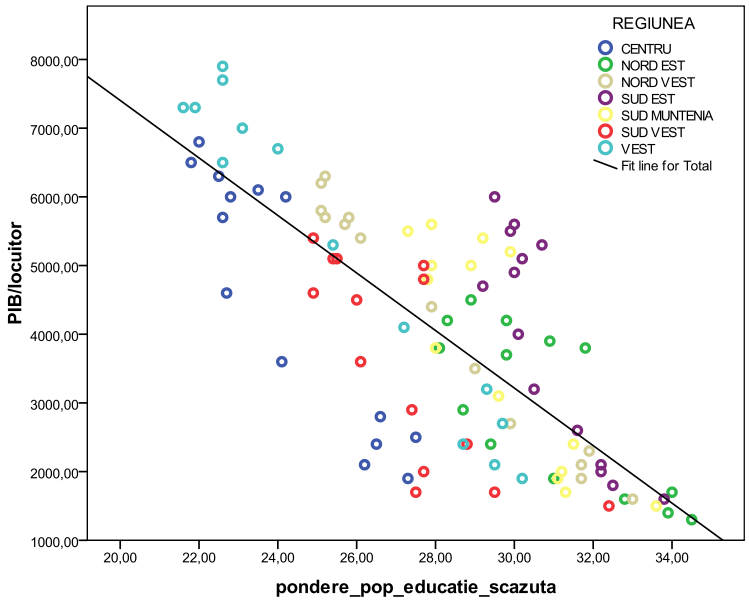


**Figure no.8. The relationship between the weighting of population with a low level of education and the Gross Domestic Product per inhabitant on regions, without the Bucharest-Ilfov region, within the period 2000-2013**

*Source: personal elaboration on the basis of the analysis in the program SPSS, v.22*

We find that the biggest Weightings of the population with a low level of education are associated with a smaller Gross Domestic Product per inhabitant, while in the regions in which the Population with a low level of education has a low weighting, there is a bigger Gross Domestic Product. The intensity of the connection between the Weighting of population with a low level of education and the Gross Domestic Product per inhabitant was studied using the Pearson correlation coefficient. Following the application of the Pearson correlation coefficient, a negative value of 0.769 was obtained, significant from a statistical point of view. The coefficient shows us that there is a very strong negative correlation between the Gross Domestic Product per inhabitant and the Weighting of population with a low level of education. We can state that as a higher level of economic development is registered, the Weighting of population with a low level of education decreases. In the regions in which a high Weighting of the population with a low level of education is registered, the Gross Domestic Product per inhabitant is low.

**Table no. 6 The correlation between the Gross Domestic Product/ inhabitant and the Weighting of population with a low level of education**

| | | GDP/inhabitant | Weighting of population with a low level of education |
|---|---|---|---|
| GDP/ inhabitant | Pearson Correlation | 1 | -0,769** |
| | Sig. (2-tailed) | | 0,000 |
| | N | 98 | 98 |
| Weighting of population with a low level of education | Pearson Correlation | -0,769** | 1 |
| | Sig. (2-tailed) | 0,000 | |
| | N | 98 | 98 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

*Source: personal elaboration on the bais of the analysis in the program SPSS, v.22*

Under the conditions in which we consider that the variable Gross Domestic Product per inhabitant depends on the Weighting of population with a higher level of education and on the Weighting of population with a low level of education, we apply a multiple linear regression model of the form:

$$Y = a + b_1 \cdot x_1 + b_2 \cdot x_2$$

The coefficients of the *multiple linear regression model* were determined with the SPSS program and are centralized in *Table no. 7*

**Table no. 7. The coefficients of the linear regression model**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 5382,265 | 1708,459 | | 3,150 | 0,002 |
| | Weighting of population with a university degree | 445,202 | 64,095 | 0,529 | 6,946 | 0,000 |
| | Weighting of population with a low level of education | -213,658 | 41,472 | -0,392 | -5,152 | 0,000 |
| a. Dependent Variable: GDP | | | | | | |

*Source: personal elaboration on the basis of the analysis in the program SPSS, v.22*

On the basis of determining the coefficients, *the multiple linear regression model* can be written as:

$$\text{Pib}_{\text{loc}} = 5382,265 + 0,529 \times \text{Pond}_{\text{pss}} - 0,392 \times \text{Pond}_{\text{pes}}$$

The Pearson correlation report for *the multiple linear regression model* has the value of 0.854. The determination coefficient is 0.729, and the adjusted one is 0.723.

**Table no. 8. The Summary model**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,854[a] | 0,729 | 0,723 | 945,49329 |
| Predictors:(Constant) Weighting of population with a low level of education, Weighting of population with a university degree | | | | |

*Source: personal elaboration on the basis of the analysis in program SPSS, v.22*

The regression model used explains in a percentage of 72.9% the variant of the variable *Gross Domestic Product per inhabitant* depending on the variant of the variables *Weighting of population with a low level of education* and *Weighting of population with a higher level of education.*

**Table no. 1ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 228001072,039 | 2 | 114000536,020 | 127,523 | ,000[a] |
| | Residual | 84925968,777 | 95 | 893957,566 | | |
| | Total | 312927040,816 | 97 | | | |
| a. Predictors:(Constant) Weighting of population with a low level of education, Weighting of population with a university degree | | | | | | |
| b. Dependent Variable: GDP | | | | | | |

*Source: personal elaboration on the basis of the analysis in the program SPSS, v.22*

The Pearson correlation report is significant from a statistical point of view, the F test having a value of 127.523, the Sig. value lower than 0.01.

## V. CONCLUSIONS

Following the analysis carried out at the level of the eight regions of development of the country, we found that there are very big differences between the Bucharest-Ilfov region and the other regions of the country. In the Bucharest-Ilfov region, 35% of population between the ages of 25-64 have a university degree and the lowest weighting of graduates of higher education is in the South-Muntenia region (11.4%). At the level of the year 2014, only 12% of the population between the age of 25-64 from the North-East region and South-East region have a university degree.

In the year 2013, the West region of Romania had the lowest weighting of adults between the ages of 25-64 that participated in activities of education and training (0.7%), while the North-East region registered the biggest weighting of adults that participated in activitites of education and training (4.2%).

These differences grew rapidly and distinctly between Bucharest and the rest of the country. Except the city of Bucharest, which has a special economic situation, the economic development followed a West-East direction, the proximity of the Western markets spreading an economic growth. The statistical data, though present oscillations in time because of some local factors, we can observe the way in which the economic growth had a significant geographical component, the underdeveloped zones being concentrated in the North-East region, marked as being dependent on agriculture, and also by the proximity of Moldavia and Ukraine. The West

and Central regions of the country have the advantage of their position, being closer to the Western markets and the reduced dependence on the primary sector.

Synthesizing the above-mentioned, we observe that one of the most important consequences of the disparities appear at the territorial level, under the form of regional imbalances. As the extremeley vast literature in the field suggests, according to the results of our analysis, the existence of such differences would be caused by many factors like: the economic development and the current conditions (welfare, the access to education, the degree of employment and unemployment, health). The results of the analysis point out the serious problems the regional development confronts, by identifying these determining factors, they can be corrected more easily by implying massive efforts on a long time span. Besides the causes above mentioned, that left their mark on the economic development, we met a series of other determining factors, like: the degree of qualification of the workforce, the domestic or international migration (one could see that the least developed zones confront a high number of immigrants attracted both by developed regions of the country and by other states), the infrastructure which, in the North-East region is the least developed, the distance to the sources of raw materials, and the capacity of absorbtion of the market.

The correlation on regions of development, within the period 2000-2013, between *the Gross Domestic Product per inhabitant* and the *Weighting of population with a higher level of education* is direct and very strong. We can see that a high *Weighting of population with a university degree* correlates with a bigger *Gross Domestic Product per inhabitant*, while a low *Weighting of population with a university degree* is found in a region with a low *Gross Domestic Product per inhabitant*. Among the analysed variables there is a direct and very strong correlation. Following the application of the Pearson correlation coefficient, it was obtained a value of 0.808, significant from a statistical point of view.

The representation in the same system of axes of the pairs of numbers corresponding to the *Weighting of population with a low level of education* and *the Gross Domestic Product per inhabitant*, in the eight regions of development of the country, pointed out a strong correlation of values, but in the opposing direction. We found that the highest *weightings of the population with a low level of education* correlate with a smaller *Gross Domestic Product per inhabitant*, while the regions in which the *population with a low level of education* has a low weighting, have a bigger *Gross Domestic Product.*

Following the application of the Pearson correlation coefficient a negative value of 0.769 was obtained, significant from a statistical point of view. The coefficient shows us that there is a very strong negative correlation between *the Gross Domestic* Product per inhabitant and the weighting of *population with a low level of edcuation*. Thus, we can state that as a higher level of economic development is registered, the weighting of population with a low level of education decreases. In the regions in which a high weighting of *population with a low level of education* is registered, *the Gross Domestic Product per inhabitant* is lower.

If we consider that the level of development of a region expressed by *the Gross Domestic Product per inhabitant* depends on the weighting of the *Population with a university degree* and the weighting of *population with a low level of education*, the report of the Pearson correlation for the *multiple linear regression model* calculated has a value of 0.854, the determination coefficient is 0.729. *The multiple linear regression model* applied explains in a percentage of 72.9% the variation of the variable *Gross Domestic Product per inhabitant* depending on the variation of the variables weighting of *Population with a low level of education* and weighting of *population with a university degree*. Analysing the factors which determined this difference between the regions of the country, especially the North-East region, we find that a great part of them could be removed by actions promoted and implemented not only at the central level, but also at the local level. Thus, starting from the improvement and the extension of infrastructure the degree of attractiveness of the region for foreign investors can be increased, fact that could increase the degree of industrialization of the zone, the level of education of the workers, the work productivity and implicitly the increase of the incomes.

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