ECONOMIC GROWTH AND REGIONAL INEQUALITY IN ROMANIA

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Abstract: After the collapse of communism, Romania, just like other Central and East European countries, has experienced profound social and economic mutations, reflected in all activity sectors (from the transition to a market economy and democratic freedom-based society to the decreasing number of active and working population, increasing unemployment, workforce's growing risk of poverty, rising vulnerability of certain socio-professional groups). Starting from these findings and using an appropriate methodology to identify regional convergences and disparities, the present paper is meant to perform a statistical and territorial analysis of the economic gaps recorded at the level of the Romanian counties (NUTS 3 level) during the last two decades and a half. The conclusions converge towards the existence of an adjustment of the economic structures, both from the territorial and temporal perspective, while the issue of reducing regional gaps remains one of the main challenges of the future.

Key words: economic development, regional disparities, vulnerability, multivariate analysis,

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INTRODUCTION

Sustainable economic increase must take into account a series of key macroeconomic variables (Anghelache et al., 2016) which measure, correlate and analyse economic performances: growth rate of GDP, unemployment rate, inflation rate and balance of payments of current account. The four variables make it possible to assess both internal and external macroeconomic imbalances, to monitor changes that take place in economy and to trace the future directions to be followed by medium and long term economic policies.

In 2010 the European Commission launched a document entitled EUROPE 2020 which, in fact, represents a European strategy for smart and sustainable growth meant to favour the inclusion of all European citizens. The three priorities of EUROPE 2020 Strategy are: smart growth through knowledge-based economy and innovation, sustainable growth by promoting a more efficient, more ecological and more competitive economy; inclusive growth by promoting a higher employment rate of the labour force, meant to ensure social and territorial cohesion.

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Regional disparities are caused by numerous factors, such as: infrastructure and accessibility, competitiveness of enterprises, volume of foreign investments, skilled labour force, presence of local resources and their use, proximity to major markets, out-migration of labour force and volume of remittances etc.

Increasing inequalities can be regarded as a normal phenomenon for an emerging economy as the Romanian one, which could enrol in Kuznetz's theory (Kuznetz, 1995), according to which social and economic gaps at the regional level are amplified in the early stages of society transformation or against the background of the beginning of an economic growth, while the subsequent phases experience the gradual decrease of gaps in relative and/or absolute terms (Sala-i-Martin, 1996; Zaman et al., 2013). Several theories explain regional differences as the natural/inherent consequence of physical and geographical differences between regions or countries (Sachs, 2005), while others argue in favour of the development of a region from centre to periphery through scale economies, differentiation of products and transport costs (Krugman, 1991). According to Piketty, it is becoming increasingly clear that the laws of market economy do not bring about processes of inequality convergence and reduction (Piketty, 2014); on the contrary, they deepen them, developed regions absorbing larger and larger amounts of capital and labour force from less developed regions.

The analysis of regional disparities has become a significant issue during the last two decades, arousing much interest on behalf of researchers (Kuttor, 2009; Benedek & Verres, 2013). The concept of disparity (discrepancy. inequality. disequilibrium) has been used in geography and spatial geography with the purpose of identifying, measuring and analysing the intensity of different human activities, using specific indicators (Avram & Postoiu, 2016). Depending on the analysed context, we can take into consideration other terms too, such as convergence (Rey & Jnikas, 2005), polarization, concentration, dispersion, hierarhichisation (Boldea et al., 2012). When assessing the degree of disparity, research analyses / has to analyse both the territorial (spatial) scale which the phenomenon takes place at and the temporal dimension. The role of space in measuring regional disparities is granted more and more attention in the specialty literature (Chirila, 2014; Benedek, 2015; Jencova et al., 2015), while, in respect of time, although they acknowledge the fact that reducing economic gaps is a long lasting process, the real perspectives of mitigating differences can be highlighted by performing a medium-term analysis.

OBJECTIVES AND METHODOLOGY

Based on the above mentioned considerations, we tried to identify the main factors that have a strong (either positive or negative) impact on regional disparities. Thus, we identified both external (volume of foreign investments, transfer of technology, brain-drain) and internal causes, the latter being outnumbered by the former (local governance, preservation of some traditional patterns and obsolete mentalities, factors of natural, demographic and social risk, weak territorial accessibility and interconnectivity etc).

Starting from a set of hypotheses and applying an appropriate methodology meant to point out the regional disparities, the authors intend to identify, reconstitute and quantify the main socio-economic elements that have triggered the more or less recent and persistent socio-economic gaps between the Romanian counties (NUTS 3 level), as well as to draw a diagnosis of their repercussions at the regional and national level in spite of the relatively new process of modernization of social and economic structures.

It is a cross-scale statistical and cartographical analysis from county to regional and further on to national scale, which represents an opportunity to point out important hotspots/coldspots of economic development and their impact during the last 25 years, shaping an overall image of the evolution of Romania from the collapse of communism up to the present. In order to accomplish the above mentioned objectives we analyzed and graphically/cartographically represented six indicators that best illustrate socio-economic disparities, contributing to their measurement and

investigation, indicators that derive both from the economic (GDP per capita, volume of exports, real average wages, labour productivity) and social field (employment and unemployment rate).

The information used was undertaken from data provided by the National Institute of Statistics (Tempo-Online) and the database thus created was correlated to the cartographic support mentioned above. The methodology used to process the information corresponds to a time and space analysis specific to the geographic study of the population and territory. In the end, after the data were standardized and normalized, in order to extract patterns of socio-economic disparities, we drew a hierarchical ascendant classification based on the above mentioned indices, the statistical data being graphically processed with the help of the PhilCarto software.

RESULTS AND DISCUSSIONS
Evolution of GDP
Total GDP represents an economic indicator which characterizes a country's economic growth on the basis of its net production, seen as a correlation between fixed capital, employment and the consumptions of the material circulating means. The analysis at the regional level (table 1) helps identify the most important trends in the evolution of the share of the regional GDP in the national one, as follows:

- the period between 1995-2005 reveals a significant increase in the contribution of Bucharest-Ilfov region in forming the national GDP (from 15 to 23%) and a slight/incipient growth of the West region; the other regions record comparable shares in the total GDP, ranging from a minimum of 9.17% in 1995 (in the case of the South-West region) to 8.19% in 2005 (recorded by the same region) but, on the whole, all regions record a decrease in the share of the value of the above mentioned indicator;

- the period between 2005-2014 preserves the same trend, Bucharest-Ilfov region getting to produce 27% of the national GDP, while the other regions continue to experience a decrease in their participation, even though to a smaller extent in comparison to the previous period. Overall, throughout the whole investigated period, North-East and South-Muntenia regions stand out through the most important drops.

The factors behind this trend are manifold, pointing to the difficult period Romania has experienced on its way from a socialist centralized economy to a market one and the efforts it had to make in order to adapt the rigours and commitments imposed by the EU accession. These processes have involved not only significant efforts on behalf of the counties/regions in order to adjust to the new economic environment (Goschin, 2014), but also high social and economic costs, the counties/regions that have failed to adapt effectively lagging behind.

Table 1. Share (%) of regional GDP in national GDP (national GDP = 100%)
(Data source: INS)

Region	1995	2000	2005	2014	2014/1995 difference
Bucharest - Ilfov	15.15	22.32	23.27	27.01	11.86
Centre	12.33	12.15	11.38	11.22	-1.11
North-East	13.61	11.86	11.36	10.21	-3.40
North-West	11.94	11.50	11.81	11.38	-0.56
South-East	13.27	11.71	11.37	11.17	-2.10
South-Muntenia	15.23	12.27	12.70	11.97	-3.26
South-West	9.17	8.79	8.19	7.51	-1.66
West	9.31	9.41	9.92	9.54	0.23

The analysis of the GDP average annual growth rate during 1990-2014 (figure 1) reveals a much stronger inter-regional divergence tendency than intra-regional disparities. The cartodiagrame highlights the penetration from the western part of the country of the foreign capital, which has brought about numerous investments and the speeding up of the GDP average annual growth rate, while the areas with the lowest GDP average annual growth rate (east and south-east) overlap the regions confronted with industrial decline and fragile economies, where the shock of competitiveness loss was not undertaken by a satisfactory influx of domestic or foreign capital. An important part is played by transport infrastructure (its precariousness), the low accessibility of certain counties/regions (in the north-east and south-east), as well as by the inadequate qualification of the local labour force, which has not experienced a (much necessary) process of professional conversion.

Employment rate of labour force

Another important indicator, commonly used in the analysis of regional disparities, is the employment rate of labour resources, which provides information on the labour market trends and its reactions to different internal and external factors. Being closely related to the evolution of the demographic system, which has faced alarming changes over the last 25 years (such as a decreasing total population, an obvious ageing trend, a fertility drop to 1.3 children/woman etc), the employment rate followed the same quantitative and qualitative decreasing tendency, expressed by the reduction of the volume of the working age population and the out-migration of some highly skilled categories, such as specialists in IT, doctors etc.
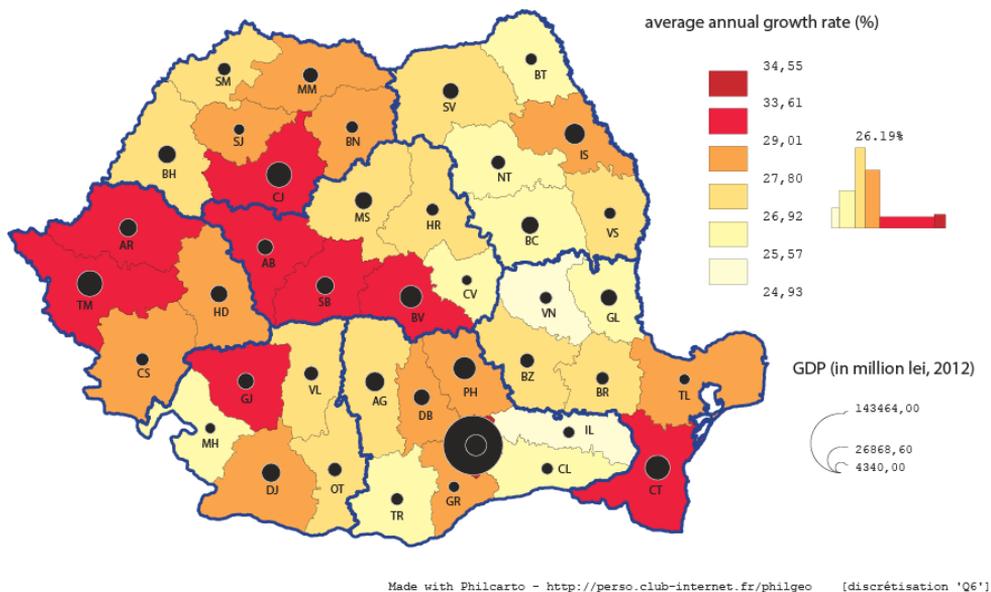

Made with Philcarto - http://perso.club-internet.fr/philgeo   [discrétisation 'Q6']

Figure 1. GDP annual average growth rate (%), 1990 – 2014
(Data source: INS)

Beginning with 1990, all regions experienced a diminishing tendency (figure 2, table 2), introducing a certain (though negative) territorial convergence. Male employment rate has been constantly higher than the female one (although with slight differences), a phenomenon which is specific to former communist countries which, through a particular interpretation of the concept of genre equality, promoted an accelerated insertion of women on the labour market. In the early 2000s, Bucharest-Ilfov region begins to distance itself from the other regions, the gap being of 10% in comparison to the North-West region, ranking second.
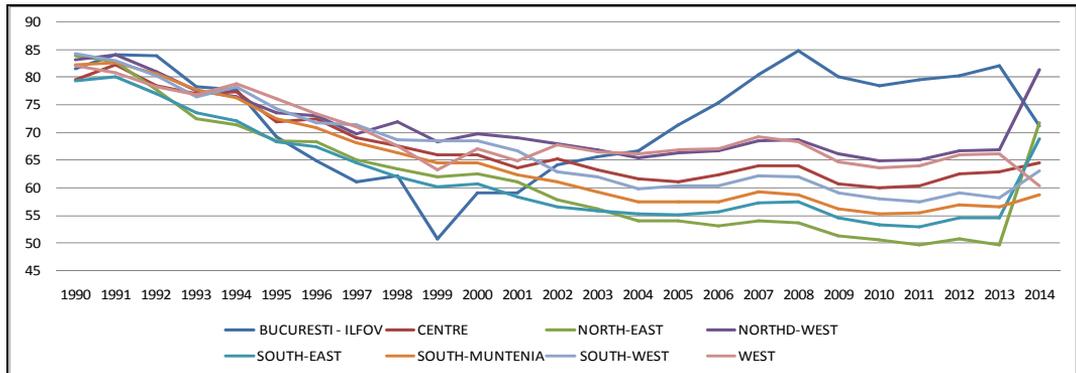
Figure 2. Dynamics of employment rate by regions (%)
(Data source: INS)

In 2014, Bucharest-Ilfov, North-West and West were the only ones to record an employment rate higher than 70%, the most dramatic decline (of about 20%) being typical of the North-East. In this context, the financial resources allocated in 2014-2020 will play a fundamental role in reducing the differences between regions and increasing the employment rate at the regional level.

Table 2. Evolution of employment rate by regions (%)
(Data source: INS)

Regiuni/Anul	1990	2000	2010	2014
North-West	83.2	69.7	64.9	71.3
Centre	79.5	66.0	60.0	64.6
West	82.0	67.0	63.6	70.4
South-West	84.3	68.5	58.0	63.0
South-East	79.3	60.8	53.3	68.8
North-East	83.9	69.7	50.6	61.8
South-Muntenia	82.2	64.6	55.3	68.7
Bucharest- Ilfov	81.6	59.0	78.5	71.2

Real wages

This indicator expresses the amount of goods and services an employed person can buy with the help of his nominal wages. An atypical phenomenon of the Romanian labour market is the fact that salaries are higher in the public field than in the private one, although it should be the other way round, since more than 70% of the GDP is created by the latter. Real earnings rose from 1990 to 2014 by about 40%, but the 1990s were marked by an evolution with significant drops, in certain regions the real wages decreasing even by 50% in comparison to 1990, the minimum value being reached in 1997 (figure 3). At the end of the year 2015, the gross nominal average salary was of 2,659 lei and the net one of 2,114 lei, the highest values being recorded in the field of information technology (4,756 lei), and the smallest ones in that of hotels and restaurants (1,083 lei).
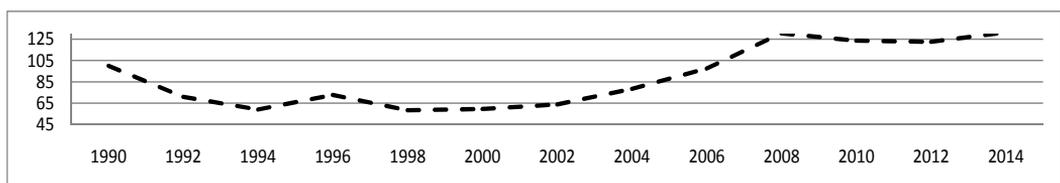

Figure 3. The index of real wages (%) (1990 = 100%)
(Data source: INS)

The best paid employees in the country continue to be those in Bucharest (2900 lei), enjoying the advantage that the capital city houses both the headquarters of some of the biggest companies in Romania and a number of international corporations. The employees in Ilfov county rank second in respect of their net nominal average salary, given the fact that here one can find some of the most important companies in Romania.

Unemployment rate

In early 90s the unemployment rate explosively rose because of the drastic decline in economic (especially industrial) activities (figure 4). The most affected areas were the former industrial ones in the centre and western part of the country. The counties with an important share of the agricultural sector placed themselves below the average unemployment rate due to the phenomenon of *"rural return"*, which affected a significant part of the workforce that was dismissed in the first years after the collapse of communism. But, as a matter of fact, the large development of (subsistent) farming disguised many unemployed people in farmers.

Afterwards, in 1999, the accelerated restructuring of some activity sectors (such as the mining one) and the new legislation on severance pays induced a new significant increase. After 2000, the unemployment rate constantly diminished until 2009, when the world economic crisis brought employment back to the fore. The situation improved at the level of almost the entire country, only few areas in the north-east still standing out through higher rates. One of the factors that had a positive impact on its dynamics was the investments in creating jobs (as, for example, lohn units employing much labour force but for very small wages).

On the whole, the significant differences between the two decades reflect the passage from a transition economy to a functional market one, illustrating the different visions of the governing political parties: left-wing policies subsidized underperforming economic branches under the pretext of *"social peace"*, in opposition to the reformist will of right-wing governments. In 2015 the unemployment rate was of 6.7%, Romania ranking sixth in the top of the counties with the lowest unemployment rate in the EU, Ilfov country recording the lowest value in the country (1.83%).
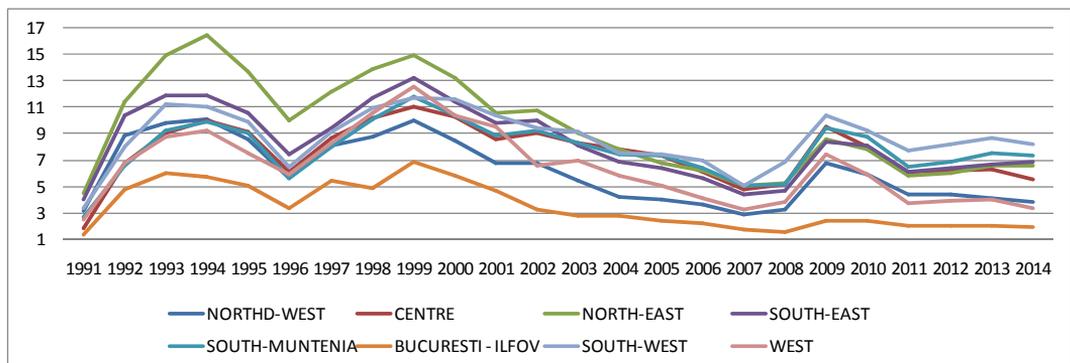

Figure 4. Unemployment rate by regions (%)
(Data source: INS)

Labour productivity

Labour productivity and growth are key-factors in any economy, which depend on the availability and quality of the labour resources and technologies used. Of the various methods of computing labour productivity and starting from the statistical data we disposed of, we chose to obtain this indicator by calculating the ratio between the GDP and the active population.

The results obtained illustrate once more the clear differences between the Romanian counties and regions induced by a whole complex of factors: human and psychological, natural, social and economic, structural and technical. The earlier industrialized counties, with a tradition in this field and skilled labour force stand out through high values (such as Brasov, Cluj, Prahova, Sibiu, Arad); at the opposite end, there are the agricultural counties, with an overrepresentation of the population employed in the primary sector also due to the late industrialization process initiated in the communist period, which could not alter deeply rooted practices (as it is the case of many counties in the east – Botosani, Vaslui, Vrancea and south – Teleorman, Mehedinti). The latter category also includes some rather isolated mountainous counties, which do not benefit from an adequate infrastructure but from outdated equipment and ageing labour force (as it is the case of Salaj and Harghita).

Share of exports

The analysis of exports by counties also reveals significant discrepancies. Romania's foreign trade is by far dominated by Bucharest-Ilfov region, which in 2014 accomplished 20.5% of the total volume of goods exports (10.7 billion Euros), followed, at a great distance, by Arges (51. billion Euros) and Timis (4.8 billion Euros), the last one alone exporting as much as the 18 bottom ranking counties in the national top. The first 10 top counties monopolize two thirds of the Romanian exports, in 40% of the counties imports exceeding exports.

However, our problem is not the trade deficit, but the fact that, with few exceptions, we export goods with a low added value and import products with a high added value. In the first four months of the year 2016, the structure of the Romanian commerce was dominated by machinery and transport equipment (44.2% in the case of exports and 36.7% in that of exports) and also by other manufactured products (33.3% in the case of exports and 31.4% in that of exports).

Ascendant hierarchical classification

In order to obtain a typology of the regional discrepancies in Romania, we aggregated six socio-economic indicators (GDP per capita, volume of exports, real average wages, labour productivity, employment and unemployment rate) and applied a cluster analysis (the up-going hierarchical classification) meant to highlight the similarities between the administrative units taken into consideration (NUTS 3 level – counties). The five classes obtained (figure 5) have a coherent logic of their spatial distribution, explainable through the political, socio-economic and demographic factors described below.

Class 1 is best represented, comprising 16 counties especially in the north, but also east and south; they are characterised by high unemployment rates, low labour productivity, very low wages and an average employment rate, illustrating the so-called "poverty of the employed population", that is people who have jobs but get poor wages. They are the poorest and most underdeveloped in the country, although some of them have the chance to rise up (such as Bihor or Suceava). Class 2 includes 4 counties (Sibiu, Arad, Alba and Hunedoara) with a rather low labour productivity and a high unemployment rate, explainable through their strongly industrialized past, especially in the case of the last two counties which have been long considered less favoured areas because of the active restructuring of the mining sector and closing of steel works, corroborated with the lack of a plan of economic revival meant to attract investors. However, at present they enjoy a professional conversion strategy, also staking on tourism. Class 3 has a large distribution area, comprising 13 counties that have a high unemployment rate and a low labour productivity and employment rate. They are either counties which record a high gap between the county capital and the other localities (such as Iasi, Bacau, Galati and Dolj) or counties which have a certain economic profile (agricultural – Calarasi, Ialomita, Braila, mining – Caras Severin or tourism – Tulcea). Class 4 includes only 3 counties with a value of the wages and labour productivity above the national average and a good share of the GDP. They are located in the mountainous and

submountainous area, being endowed with distinct productive activities: mining – Gorj, car production – Arges, oil exploitation and refining – Prahova.

Class 5 comprises 4 counties (Timis, Cluj, Brasov, Constanta) with a very low unemployment rate and wages above the national average; their county capitals are important regional metropolis cities with complex functions (administrative, economic, tourism and university) and a highly skilled labour force which, although confronted with periods of decline, have preserved their economic success (Surd, Kassai and Giurgiu, 2011).

Bucharest and Ilfov County were not included in the classification since they stand out through atypical values of all the indicators taken into consideration. Romania, just like other East-European countries, experiences the phenomenon of hypertrophy of the country capital city. It concentrates 8.8% of the national population but gives 21% of the national GDP, 20% of the small and medium enterprises being located here and attracting 51.1% of the total foreign investments, bringing about the highest level of wages, services and prices and a large demand for skilled labour force.

The map of regional differences shows the similitudes between Romania and other East-European countries: the most developed region is the one centred on the capital city, which is the main engine of the country's convergence process but at the same time the main source of increasing inter-regional disparities, while the least developed areas are situated at the border (with the Republic of Moldova – the North-East, with Bulgaria – the South). Their underdevelopment is correlated to deindustrialization, unemployment and out-migration (Popescu, 2014), but also to the good representation of farming activities and rural peripheries, being little attractive for investors.
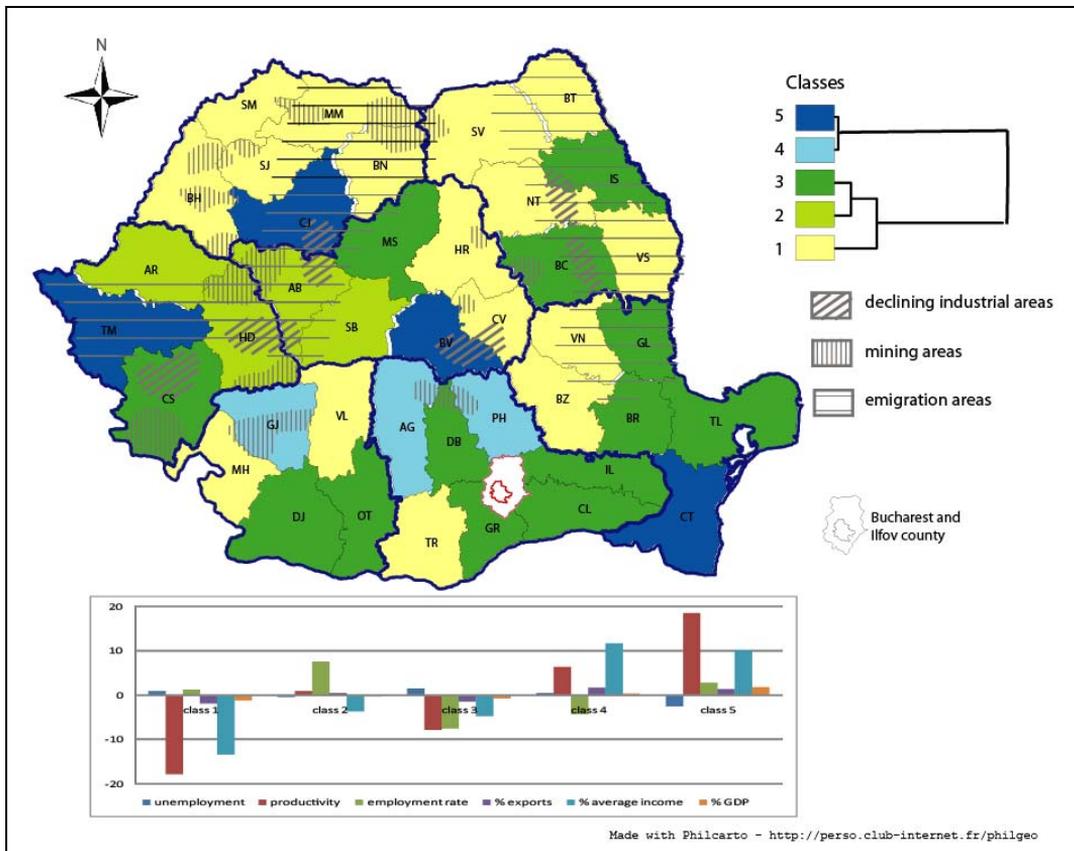

Figure 6. Typology of regional disparities in Romania

CONCLUSION

The intensive and economic development of a country should take into account (as much as possible) the prosperity of all its regions and all its citizens. But Romania has developed insularly, the prosperity of certain regions/counties not automatically binging about the development of the neighbouring counties but ruining them by attracting most investments. In Romania, the poverty of rural spaces coexists with the welfare of certain urban areas and the low labour productivity of some regions (such as the North-East and South-West) coexists with the high value of this indicator recorded in Bucharest-Ilfov region. The reasons for these increasing inequalities are manifold: political (corruption – which can lead to the regress or stagnation of some counties, even if they are endowed with a promising potential), socio-economic and demographic (infrastructure, qualification level of labour force, in / out-migration – less developed region generally face a large number of emigrants, attracted by better developed regions both in Romania and abroad). Enjoying a favourable geographical position (closer to western markets) and a smaller dependence on the primary sector, the West, North-West and Centre regions have been more appealing to foreign investors, which has largely contributed to their economic development.

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