CONVERGENCE VERSUS DIVERGENCE IN THE REGIONAL DEVELOPMENT PROCESS

Mădălina OPRIȚESCU, PhD student
University of Craiova

1. Introduction

The main goal of EU is to become one of the world's most dynamic economies. In order to achieve this goal, the EU must, above all, keep up to date with all the new technologies, as its regional development policy represents in this respect the set of measures that the central governmental authorities take aiming at social and economical development.

The regional development concept is strictly related to that of economic development and it is oriented towards this development's territorial, area related and local aspects. This is concept that aims at giving an impulse to the economic activities, at stimulating and diversifying the investments, mainly in the private sector, at reducing unemployment and, last but not least, it is meant to lead to an improvement in general welfare. As is, the regional development involves, mainly, the use of local resources and, secondly, the national and international ones, in order to increase the territorial competitiveness.

Throughout time, the countries have not developed uniformly and, thus, most of them, including those with a high level of development, are confronted with numerous regional problems:

– the tendency for some regions only to record an accentuated economic growth, to the detriment of others, which underwent a relative sub-development (e.g. the Guadeloupe Region in France, the Sachsen-Anhalt Region in Germany);

– reduced attention paid to some territories or the so called delay in relation to the regional development (southern Italy and western Ireland);

– a decline suffered by some regions in relation to the rest of the country as result of some modifications in the economic conditions (some regions in Great Britain);

– the European countries recorded a remarkable economic evolution after the Second World War, during which the upstream industries developed, while older ones entered decline;

– the urbanization intensification and the relative depopulation of the rural area, as result of a sustained demographic growth which determined large population movements;

– the scarcely populated areas or those with production concentrated in the primary sectors could not maintain the regional development and the social infrastructure at a level generally accepted as satisfactory (Norway, Sweden);

– the slightly increased unemployment level in some areas, the less satisfactory social and environmental conditions and, in general, the living conditions which have been less attractive than in others.

When these problems reached a level considered as unacceptable or when the already existing disparities were perceived as dangerous, the public authorities attempted to neutralize both the causes and their effects through various means. The policies which were adopted aimed, in principal, to apply some measures in the favor of the regions experiencing difficulties.

2. Convergence and divergence in regional development

The regional development is a vital process for Europe's economic and social integration. The diversity of the European regions does not represent an impediment for the regional development, as it does not aim at global uniformity, but at achieving, quintessentially, a decent living standard within.

Two tendencies of regional development, which have succeeded one another in different moments in time, have been identified within the European Union[1]:

- an attenuation of regional disparities (**regional convergence**);
- a deepening of regional disparities (**regional development divergence**).

The convergence concept is translated through a decrease in disparities between the economic indicators of different member countries from a geographical area and involves a superior growth rate of the poorer countries, compared to richer ones, which would generate the reduction of the income gap between them. The divergence occurs when the economic growth gap between the regions increases.

The specialist papers operate with both the term "disparities" and "gaps" or "regional inequalities". Some authors consider that inequalities become disparities when they exceed 30% amplitude. This means that convergence (inequality reduction) is considered to be the main way to ensure the social and economic cohesion.

The most frequent are the disparities recorded between urban and rural regions, as there is also a close connection between the economic development level and the region's urbanization level. Even if the urbanized regions are considered to be developed regions, they are also the regions where the most problems of the EU are concentrated in: high level of pollution, poverty, unemployment, population segregation according to income etc. Moreover, the less developed regions (both rural and urban, especially) are generally characterized by: high unemployment rate among young people; lack of innovations and use of obsolete methods and technologies; old and underperforming industrial structures; rural depopulation with special negative consequences both on a social level and for the environment; absent or insufficient road infrastructure; agricultural sector dominated by archaic practices etc.

The study of the factors that determine the regional inequalities (identified as inequalities in income level) led to an interesting hypothesis which started from observing a connection between the convergence and the regional divergence. Thus, during the early stages of the national economic development, increased disparities between the incomes at a regional level are recorded, while in an economy which reached maturity in development, the incomes have a tendency to converge. As a result, in countries which have passed from a predominantly agricultural economy to one in which industrial sectors predominate, the activities tend to concentrate in several key-cities which have contacts with more developed countries and which benefit from a numerous and diverse (from a structural point of view) population.

Also, an approach on the convergence/divergence proportion in relation with these specific aspects is represented by the Williamson hypothesis. This hypothesis underlines the gaps recorded from the regional development point of view between developed countries, in relation to the developing countries, but also the major

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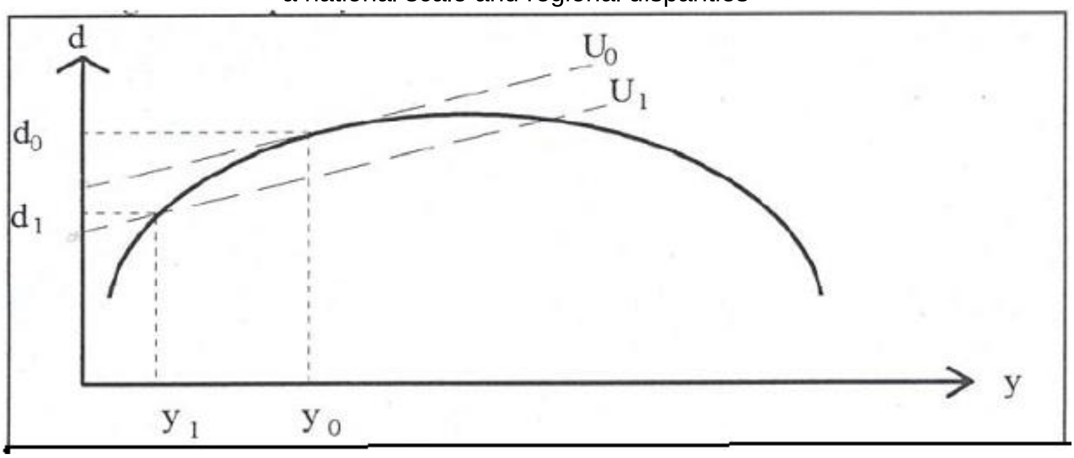
[1] http://www.mpe.eubiz.ro/?Cursuri, Fota Constantin- Regional development- college course, master Regional Development and European Projects, 2007

disparities recorded at an inter-regional level. As is, the issue of possible "compensation" between national cohesion and regional cohesion is put forward, as part of the process of economic and social development at a national scale. In the paper "Regional Inequality and the Process of National Development: A Description of Patterns" Jeffrey Williamson (1965) presents the hypothesis according to which the typical pattern of development at a national scale leads to inter-regional divergence in the process' early stages followed by convergence in the regional development, throughout the following stages. This hypothesis underlines that fact that inter-regional connections, production factors' mobility and goverment policies have a selective character in favor of the growth poles during the early stages, while the increasing level on income during following stages allows an inversion of this tendency. The relation between the size of the regional disparities and the development level at a national scale is presented in Image 1, in which d represents the dispersion of income per capita at a regional level, while y represents the income per capita at a national level.

Figure no.1. The Williamson hypothesis regarding the relation between development at a national scale and regional disparities



Source: *Dorel AILENEI, Inequalities decrease – essential condition of the economic and social cohesion, The Bucharest Academy for Economic Studies, 2007, pg. 68*

The increase of the income per capita at a national scale and the convergence in the regional growth, the two objectives adopted by the developed countries are supplementary.

In Image 1, the point in which the line of the social preferences U_0 is tangent to the Williamson curve represents the optimum combination between the income per capita at a national scale and the level of regional disparities (y_0, d_0). Faced with increased needs and reduced means to satisfy them, the poorer countries often prefer to promote development at a national level and to create attractive conditions for private investments by concentrating public investments in just a few poles of growth, rather than to offer a reduced level of assistance throughout the country, situation in which the relative attractiveness towards private investments at a national scale would drop.

The specialist are increasingly discussing about a synchronization of the processes of convergence and divergence during the integration process. However, a region's real economic situation is given by the way the regional growth is defined. For example, a region can simultaneously present a low increase of the total income and an accentuated increase of income per capita, considering that region records an emigration process with significant values during the analyzed period (Constantin, 2010). This is why the issue of finding most adequate "way of measuring the regional growth" presents itself. This issue considerably depends on the goal which governs the measurement. Thus, the increase of the total income is used as an indicator of the region's growth in productive capacity, partly influenced by level by which the region attracts capital and labor force from other regions. On its own part, the increase of income per employed person is often used as an indicator of the modifications in the region's competitiveness, while the increase of income per capita indicates the changes in the region's economic welfare. So, one cannot firmly state that one of these measures is "the best", as each is useful in its own particular way.

Another controversial problem related to disparities in regional growth refers to the medium and long term vision on the consequences of the regional growth. Thus, according to the neo-classical modern, which emphasizes the role of demand, the regional growth leads to convergence in the regions' social and economic development, while in the vision of the models based on post-Keynesian approaches on demand the regional growth accentuates divergence

3. Case Study

The regional Gross Domestic Product (GDP) by the standards of the purchasing power (PPS) per capita has increased significantly in more of the less prosperous regions of the EU starting with the year 2000. Primary data from some of the member states suggest that rural areas have been less affected by the slowing down of the economic growth from 2008 and 2009 than the regions with high incomes and the areas that are highly dependent on exports, financial services and tourism. Nevertheless, regional disparities are increasing inside the new member states.

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Table no.1. GDP per capita evolution into PPS, inside EU countries Euro/inhabitants

GEO/TIM	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2008 / 2000	2009 / 2000
EU (27 countries)	19,10	19,80	20,50	20,70	21,70	22,50	23,70	25,00	25,00	23,50	31%	23%
Belgium	24,60	25,30	26,00	26,60	28,00	29,00	30,20	31,60	32,30	31,50	31%	28%
Bulgaria	1,700	2,000	2,200	2,400	2,600	3,000	3,400	4,000	4,600	4,600	171 %	171 %
Czech Republic	6,200	7,000	8,200	8,300	9,000	10,20	11,50	12,30	14,80	13,50	139 %	118 %
Denmark	32,50	33,50	34,40	35,00	36,50	38,30	40,20	41,70	42,80	40,60	32%	25%
Germany	24,90	25,50	25,90	26,00	26,60	27,00	28,10	29,50	30,10	29,00	21%	16%
Estonia	4,500	5,100	5,700	6,400	7,200	8,300	10,00	12,00	12,20	10,30	171 %	129 %
Ireland	27,80	30,60	33,40	35,30	37,00	39,30	41,80	43,50	40,50	35,90	46%	29%
Greece	12,60	13,40	14,30	15,60	16,70	17,40	18,70	19,90	20,70	20,50	64%	63%
Spain	15,60	16,70	17,70	18,60	19,70	21,00	22,40	23,50	23,90	22,80	53%	46%
France	23,70	24,50	25,00	25,60	26,50	27,30	28,40	29,60	30,10	29,30	27%	24%
Italy	21,00	22,00	22,80	23,30	24,00	24,50	25,30	26,20	26,30	25,40	25%	21%
Cyprus	14,300	15,300	15,600	16,100	17,000	17,900	19,000	20,300	21,60	21,10	51%	48%
Latvia	3,600	3,900	4,200	4,300	4,800	5,600	7,000	9,200	10,10	8,200	181 %	128 %
Lithuania	3,600	3,900	4,400	4,800	5,300	6,100	7,100	8,500	9,700	8,000	169 %	122 %
Luxembourg	50,40	51,10	53,80	57,20	60,00	65,20	71,80	78,10	80,80	75,20	60%	49%
Hungary	4,900	5,800	6,900	7,300	8,100	8,800	8,900	9,900	10,50	9,100	114	86%

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Malta	11,00	11,10	11,50	11,40	11,30	11,90	12,50	13,30	14,10	14,00	28%	27%
Netherlands	26,30	27,90	28,80	29,40	30,20	31,50	33,10	34,90	36,20	34,60	38%	32%
Austria	26,00	26,60	27,30	27,70	28,70	29,80	31,30	33,00	33,90	32,90	30%	27%
Poland	4,900	5,600	5,500	5,000	5,300	6,400	7,100	8,200	9,500	8,100	94%	65%
Portugal	12,50	13,10	13,60	13,70	14,20	14,60	15,20	16,00	16,20	15,80	30%	26%
Romania	1,800	2,000	2,200	2,400	2,800	3,700	4,500	5,800	6,500	5,500	261%	206%
Slovenia	10,80	11,50	12,30	12,90	13,60	14,40	15,50	17,10	18,40	17,30	70%	60%
Slovakia	4,100	4,400	4,800	5,500	6,300	7,100	8,300	10,200	11,900	11,600	190%	183%
Finland	25,50	26,80	27,60	27,90	29,10	30,00	31,50	34,00	34,90	32,30	37%	27%
Sweden	30,20	28,50	29,90	31,10	32,40	33,00	35,00	36,90	36,10	31,30	20%	4%
United Kingdom	27,20	27,80	28,80	27,70	29,60	30,50	32,20	33,70	29,30	25,30	8%	-7%

Source: Eurostat

Table no.1 illustrates the GDP per capita recorded between 2000 and 2009 in comparison with the EU-27 average. It has been ascertained that economic dynamics were high above average in the peripheral areas in the South-West, East and North of the European Union, especially in the new member states. Significant growths have been recorded in the year 2008 in comparison with 2009, growths which diminished in 2009 when the current economic crisis started manifesting itself. The new member states which recorded significant growths include Romania (261% in 2008/2000 and, respectively, 206% in 2009/2000), Bulgaria (171% both in 2008/2000 and in 2009/2000), Slovakia (190%, respectively 183%), The Czech Republic (139% respectively 118%) and the Baltic countries. Among the EU 15 member states the trend recorded slight growths and evenm decreases. Sweden, Great Britain, Italy and Frace were severely affected throughout the analyzed period. Poor performances were also recorded by a series of regions in Germany (the Sachsen-Anhalt region), Portugal (the Região Autónoma dos Açores region), Austria and Malta. The growth recorded by the average GDP at an EU 27 level in 2008/2000 reaches 31%, while in 2009/2000 it barely records a 23% growth. At the level of the year 2008, only 18 member states recorded a growth that was higher that the average growth of GDP in EU 27. The slower growth from the EU 15 member states can be explained by the fact that these states were the first to be affected by the economic and financial crisis, some of them (Italy, Denmark) having been in a recession since 2008.

Even if significant growths were recorded in the new member states, the highest level of GDP per capita is being recorded in Luxembourg, Denmark, Germany, France, Great Britain, Finland. The lowest level of GDP per capita is being recorded in Bulgaria (4.600 Euro per capita), Romania (5.500 Euro per capita), Poland (8.100 Euro per capita), compared to the EU 27 average. Significant differences are also being recorded including at the level of a country's regions; in Romania, for example, the situation is as follows (table no.2):

Table no. 2. GDP per capita, in PPS, on regions, in Romania Euro/inhabitants

GEO/TIME	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU (27 countries)	19,100	19,800	20,500	20,700	21,700	22,500	23,700	25,000	25,000	23,500
Romania	1,800	2,000	2,200	2,400	2,800	3,700	4,500	5,800	6,500	5,500

Macro-reg one	1,800	2,000	2,200	2,400	2,800	3,500	4,400	5,700	6,000	5,200
North-West	1,700	1,900	2,100	2,300	2,700	3,500	4,200	5,600	5,800	5,000
Center	1,900	2,100	2,300	2,500	2,800	3,600	4,500	5,900	6,200	5,300
Macro-reg two	1,400	1,600	1,800	1,900	2,200	2,800	3,300	4,100	4,500	3,900
North-East	1,300	1,500	1,600	1,700	1,900	2,500	2,900	3,700	4,000	3,400
South-East	1,600	1,800	2,000	2,100	2,600	3,200	3,800	4,700	5,200	4,400
Macro-reg three	2,400	2,600	2,900	3,100	3,600	5,100	6,200	8,000	9,800	8,100
South - Muntenia	1,500	1,600	1,800	1,900	2,300	3,100	3,800	4,700	5,400	4,700
Bucharest - Ilfov	3,900	4,100	4,500	4,800	5,600	8,100	9,900	12,900	16,200	13,000
Macro-reg four	1,700	1,900	2,100	2,300	2,700	3,500	4,400	5,500	5,900	5,000
South-West Oltenia	1,500	1,700	1,700	2,000	2,300	2,900	3,600	4,500	4,800	4,200
West	1,900	2,200	2,400	2,700	3,200	4,200	5,300	6,700	7,100	6,000

Source: Eurostat

The most developed is macro-region 3 (9.800 Euro) within which the Bucharest-Ilfov region recorded a significant growth (233% in the year 2009 compared with the year 2000). However, the GDP recorded even in the most developed region (16.200 Euro) continues to be much lower than the average level recorded in Eu 27 (23.500 Euro in 2009). One can also notice significant differences among regions, as the Bucharest Ilfov region records a 13.000 EURO, while the North-East region barely records 3.400 Euro, which can be justified by the fact that the economic activities are usually concentrated around county residences.

Image no. 2 illustrates the dipersion recorded by the EU member states in 2008 vs. 2000. The regional convergence of GDP per capita can be evaluated in various way, based on data provided by Eurostat through the National Statistics Institute. The simplest approach is to measure the difference between the minimum and maximum values. By using this method, the gap decreases from a 17.2 factor in 2000 to 12.1 in 2008. The main reason for this improvement was the rapid economic growth in Bulgaria and Romania. Nevertheless, as this approach only considers the extreme values, it is clear that most of the exchanges between regions are not taken into consideration. A much more correct evaluation of the regional convergence is offered by the regional GDP dispersion, an indicator which has been calculated by Eurostat since 2007. This indicator takes into account the divergences from the national average, in all NUTS 2 regions for each country, weighed accordig to the regional population.

An examination of the trend of individual evolution for each country reveals clear differences between certain groups of member states. First of all, most of the countries from EU 15 have a lower dispersion level than the new member states. It is therefore obvious that the economic process of recovery from the new member states went hand in hand with the increase of regional disparities. The third and most used approach in measuring the convergence involves classifying the regions according to their GDP per capita.

Starting with 2007, Eurostat calculates a new indicator which records the differences between the regional GDP per capita and the national average: the dispersion of the regional GDP per capita. The figures used by Eurostat are based on the GDP, by the purchasing power standard (PPS). For a certain country, the D dispersion of the regional GDP is defined as the sum of the absolute differences between the regional and national GDP per capita, weighed based on the regional population quota and displayed as a percent of the national GDP per capita:

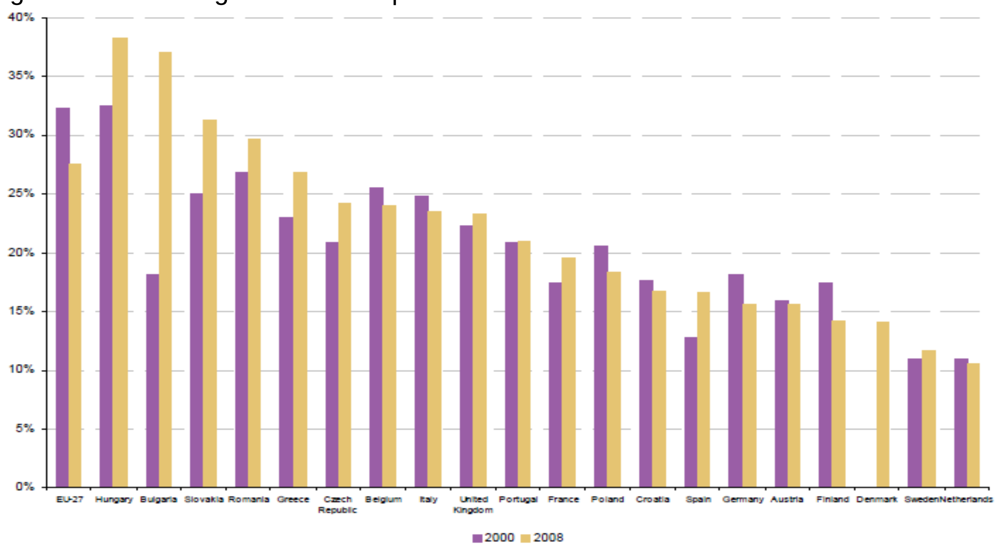
$$D = 100 \frac{1}{Y} \sum_{i=1}^{n} \left| (y_i - Y) \right| (p_i / P)$$

In the above equation:

- yi is the regional GDP per capita from the region I;
- Y is the average national GDP per capita;
- pi is the population from region I;
- P is the county's population;
- n is the number of regions in the country.

The dispersion value of the GDP per capita is zero, if the values of the regional GDP per capita are identical in all the country's regions and if all the other indicators are equal, while a growth will be displayed in case the differences between regional GDP per capita increases. Consequently, a 30% value means that the GDP in a country's certain regions, weighed based on the regional population, differs from the national value with 30%.

Figure no.2. The regional GDP dispersion



Source: Eurostat

4. Conclusions

As a result, GDP per capita is an indicator of the country or the region and is suitable for measuring and comparing the level of economic development of a country or region. Regional disparities in terms of GDP per capita between the EU regions declined over the past decade, as economic growth in the less prosperous regions exceed that of other areas. This meant a disparities reduction in terms of economic potential gap between center and periphery, and a corresponding reduction of territorial imbalance. However, although the convergence of levels of GDP per capita from one region to another was accompanied by a reduction in disparities in terms of employment rate and unemployment rate, which continues to be important both between different parts of the Union and between different areas within regions.

The interest of the European Union is to reduce disparities and to strengthen the economic and social cohesion and it has a strong economic support mainly determined by the growth of the underdeveloped regions, which would lead to a stimulation of commerce and to the creation of new markets, would limit the negative consequences of the overpopulation the more prosperous regions confront with and would ensure a balanced development from a territorial point of view.

REFERENCES

Constantin Daniela-Luminița	Regional economy – theories, models, policies, ASE Publishing House, Bucharest 2010;
Fota Constantin	Regional development- college course, master Regional Development and European Projects, 2007;
KRUEGER Andreas	Convergence and disparities in regional Gross Domestic Product, 2011;
Miklos Bakk, Jazsef Benedek	Regional Policies in Romania, Polirom Publishing House, 2010;
*****	Fourth report on economic and social cohesion;
*****	Eurostat, Statistics in focus.