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CONVERGENCE OF REGIONAL DEVELOPMENT IN THE EUROPEAN UNION

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Abstract:

During the last century Europe, politicians have become increasingly aware that the establishment of lasting domestic and international economic relations based on trust and demonstrating solidarity with individuals and / or less developed nations, have become indispensable in order to achieve general welfare It is important to analyse the conditions for achieving economic growth and regional development, which have been discussed in terms of the experiences of Member States over time and their critical issues affecting the EU and making it vulnerable. The issue of the financial instruments used by the EU to improve regional development and alignment of Member States policies is also approached.

The economic development of a region is usually expressed in terms of gross domestic product (GDP). This ratio is also frequently used as a basis for regions' comparison. Another indicator is the one related to employment. Regional convergence in GDP per capita expressed in PPS can be analysed in different ways.

Key words: region, regional development, cohesion policy, disparities, community funds, convergence.

JEL classification: F36, F63

1. INTRODUCTION

The economic development of a region is usually expressed in terms of gross domestic product (GDP). This ratio is also frequently used as a basis for regions' comparison. It is used for comparing between EU Member States and is essential in determining a wide range of policies, such as the extent to which a Member State should contribute to the EU budget.

To analyze how much the regions differ from one another in a country or across the EU-27, we need a different kind of indicator. Dispersion of employment and unemployment rate gives us an idea of how much regional rates differ from one another. As the dispersion of these rates decreases , labor market cohesion increases.

2.1. GROSS DOMESTIC PRODUCT AND DISPERSION

In the EU, real GDP growth has varied considerably both over time and between countries. The following figure highlights the annual average growth rates of the EU-27 and euro area and the EU between 2000 and 2012.

The highest increase was recorded in Lithuania (4,6% a year), and Estonia (4,5% a year) followed by Latvia (4,4%), Slovakia (4,2%), Bulgaria and Poland (both 3,8 %). In contrast, the lowest real GDP growth rates during 2000-2012 were recorded in Italy and Portugal (0,4% a year), as well as Denmark (0,8%). (figure no.1)

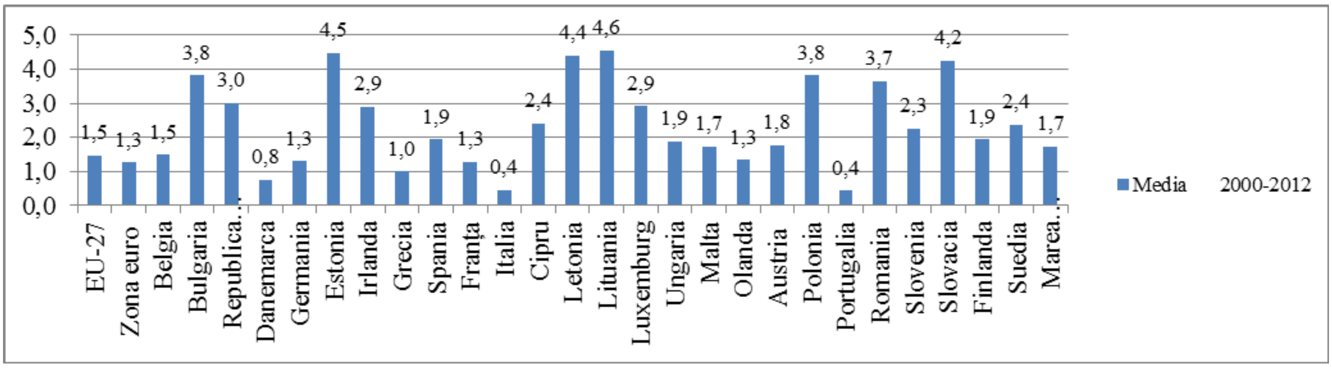

Figure no.1. Average GDP growth rates during 2000-2012
Source: author's own, based on Eurostat data

In the NUTS 2 level regions of the EU, the GDP per capita ranged between 6 500 PPS (27% of the EU-27 average) in Severozapaden in Bulgaria and 80 300 PPS (328% of the EU-27 average) in the Inner London capital region in the United Kingdom; between the two ends of the distribution, there has been a factor of 12,4 to 1. Luxemburg (266% as compared to the EU-27 average and 65200 GDP/capita), the Belgian Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest region (223%) and the German Hamburg region (202%) rank next in the classification of regions with the highest GDP/capita.

Regional convergence in GDP per capita expressed in PPS can be analyzed in different ways. The easiest method is to measure the ratio between the smallest and the largest values. With this method, the gap between the EU-27 regions was reduced to a factor of 17.1 in 2000, to 12.2 in 2010, mainly due to the rapid development of Romania and Bulgaria. However, this method uses only the extreme values, the majority of the regions not being considered. Overall, growth convergence in a few EU-15 countries and between member states, has compensated the growing divergence in other member states. Therefore, we identify the existence of an increased convergence for all EU-27 countries.

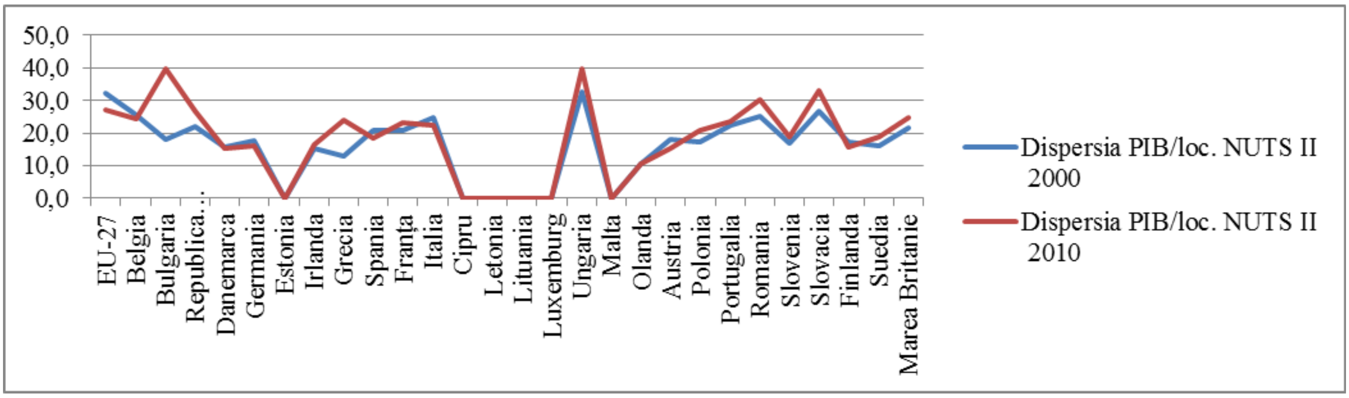

Figure no.2. Dispersion of GDP/capita 2000, 2010
Source: author's own, based on Eurostat data

The above Figure depicts an objective image of the dispersion of the GDP/capita during the two years set as a basis of comparison. The trends of the dispersion were similar during both periods, except for Greece that has recorded a significant increase in 2010, as opposed to 2000, due to the unprecedented economic crisis.(figure no.2)

Based on the available statistical data, we analysed the GDP for EU member states, by using the box-plot diagram and the principal component analysis (PCA). The PCA highlighted two groups of countries:

1. The group of countries with a high GDP throughout the years taken into account (2001-2012), namely Sweden, Denmark, the Netherlands, Ireland and Finland;
2. The group of countries with a lower GDP during the same period, namely Latvia, Lithuania, Romania or Hungary, etc.

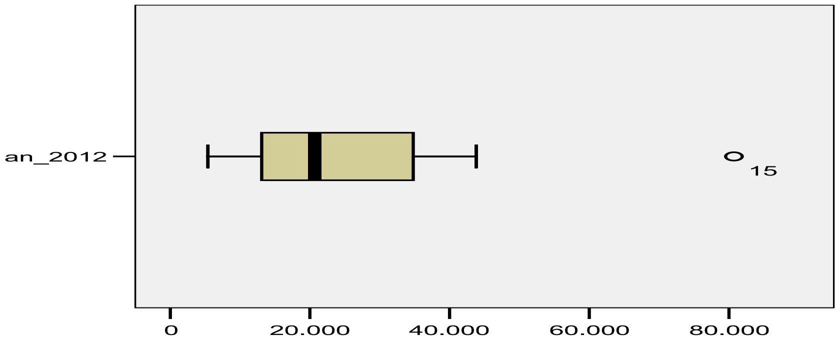

Figure no.3. box plot diagram
Source: author's own, based on Eurostat data

According to the box-plot diagram, Luxembourg is the country that stands out as an outlier in terms of the GDP, which is why we have continued the analysis of the main components without taking it into account.

As concerns the testing of the independence hypothesis between the variables, as can be seen in the following image, where is lower than 0,05, with a 95 percent probability, the independence hypothesis is rejected. Therefore, there is a connection between the variables that will be described through ACP.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.840
Bartlett's Test of Sphericity	Approx. Chi-Square	1506.720
	df	66
	Sig.	.000

Figure.no.4 Testing of the independence variable
Source: author's own, based on Eurostat data

The 98,907% percentage of the total variation is explained and interpreted by means of a factorial axis that shows a concentration.

Regions that have yet to develop are catching up fast in terms of productivity. Tis is particularly visible in the new member states: in the three Baltic states and in certain areas of POlant, productivity has increased four times faster than the EU average between 1995 and 2004. However, some of these regions have started from very low levels. Since the workforce in these regions is changing focus towards sectors with a higher added value, regional productivity is expected to increase, even if sectorial productivity remains at a constant level. Luxemburg and Ireland have recorded significant productivity increases, thus maintaining front rank positions between 2001 and 2011. On the other hand, the regional economic development in Spain almost exclusively relied on increasing employment, thus suggesting that such an increase can be difficult to maintain in the long run. In Portugal, employment has remained stable after 2001. Many of the EU member states have had employment rates that exceeded the European average, while the ones that could not reach the threshold in 2012 were Greece, Poland or Cyprus.

2.2. ENPLOYMENT AND UNEMPLOYMENT INDICATORS

Another indicator is the one related to employment. Certain countries experienced a consistent and widespread increase in employment, while others - such as Romania and Portugal - have experienced a downturn by four or five percentage points. The margin that separates the lowest employment rates of the highest rates of employment of labor in 2012 is still significant, Greece with 51.3% at one end, Netherlands with 75.1% at the other.(figure.no.5*)*

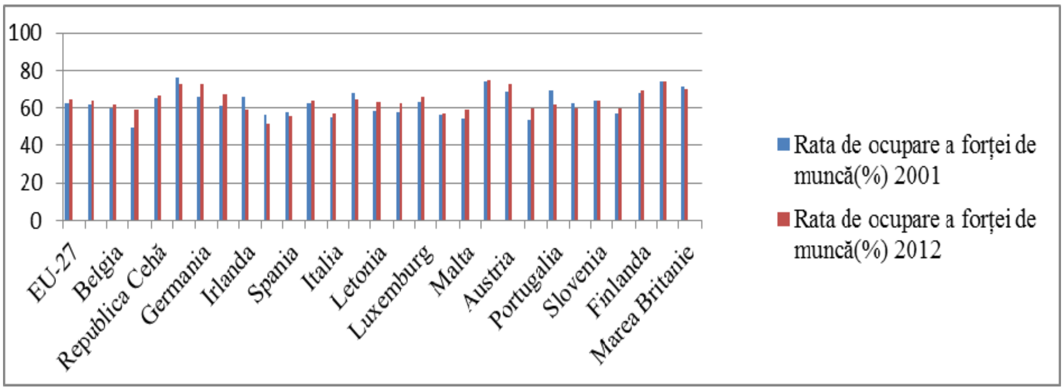

Figure.no.5 Comparative employment rates 2001-2012 in EU-27
Source: author's own, based on Eurostat data

In order to achieve the Lisbon objectives which set an overall employment of 70% and a 60% employment rate for women, the EU should generate approximately 23.5 million additional jobs, of which 7 million should be for women and 7 million for people aged between 55 and 64 years. Occupancy rates vary considerably, not only on a national level but also within member states, according to regional characteristics with a relatively high dispersion (measured by the variation coefficient for NUTS2 regions, observed in Cyprus (20, 5%) in 2012.

In order to analyse how much the regions differ from one another in a country or across the EU-27, we need a different kind of indicator. The dispersion of employment and unemployment rates gives us an idea of how much regional rates differ from one another.

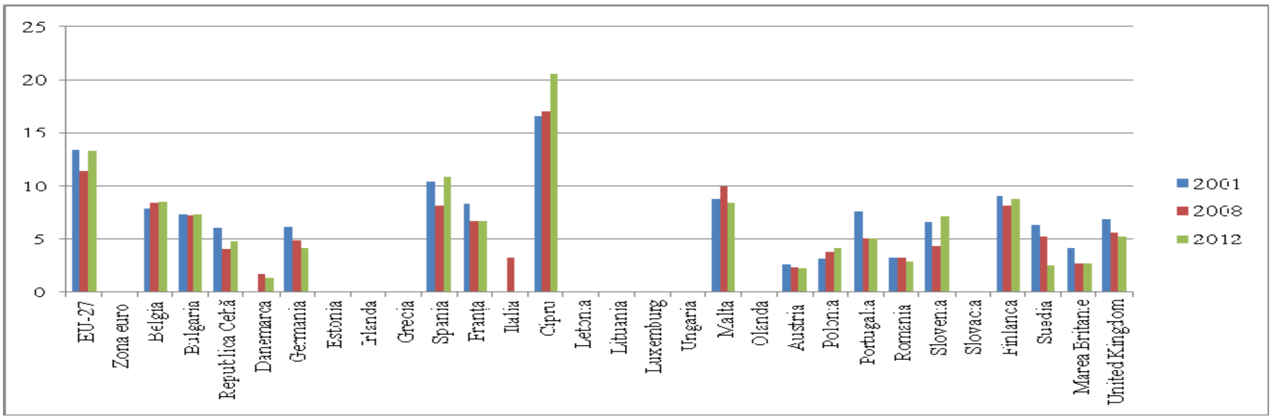

Figure.no.6. Dispersion of regional employment rates 2001, 2008 and 2012 (variation coefficient of employment rates of the 15-64 age group) from the NUTS 2 regions.
Source: author's own, based on Eurostat data

Employment rates vary considerably, not only on a national level, but also within the EU member states, depending on the regional characteristics, with a relatively high dispersion (measured by the variation coefficient for the NUTS2 regions, observed in Cyprus (20,5%) in 2012. There is also a relatively high dispersion level per regions in Spain (10,8%), while Bulgaria, Belgium, France and Malta have reported coefficients ranging between 8% and 9%. Unlike the previous situation, there are very few differences between employment rates in Austria, Sweden, Portugal, Romania or Denmark (all below 4%). The dispersion of regional employment throughout the entire territory of the EU-27 is higher in 2012 than what it would have been four years ago (1,9 percentage points higher), but relatively similar to 2001 (figure.no.6.)

Long term unemployment is one of the major concerns for politicians. Apart from the financial and social effects on personal lives, long term unemployment negatively affects social cohesion and could ultimately impede economic growth. Overall, 4,6% of the workforce in EU-27 in 2012 has been unemployed for longer than one year, the numbers increasing considerably since 2008 when it amounted to 2,6% .

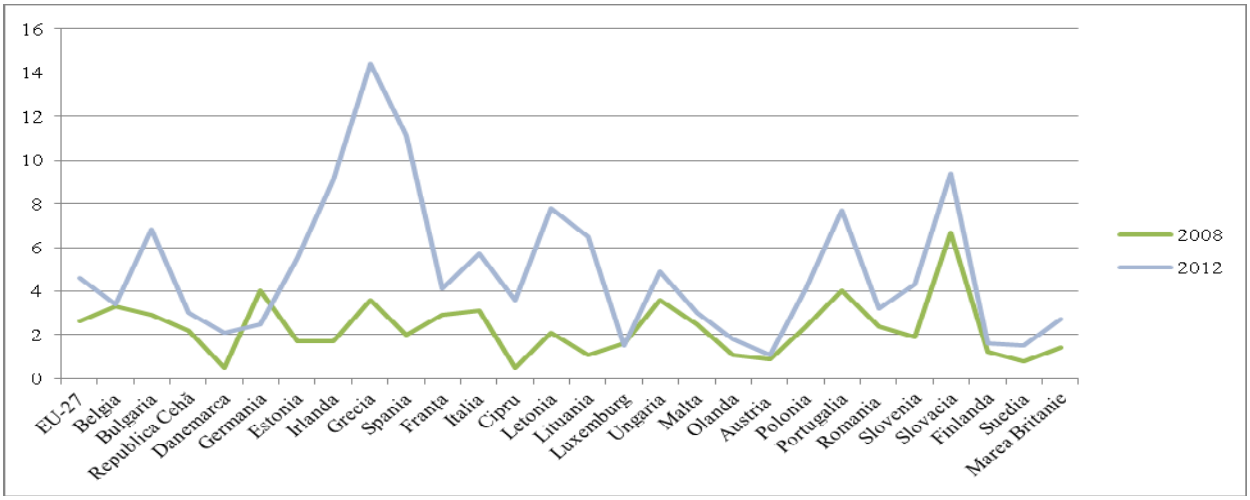

Figure.no.7.Comparative long term unemployment rates for 2008-2012 in EU states

Source: author's own, based on Eurostat data

On a national level, the Czech Republic, the Netherlands, Denmark, Luxemburg, Romania, Slovenia, Slovakia and Bulgaria have significantly reduced their long term unemployment rates in 2008. After the inception of the economic crisis, the long term unemployment rate has increased significantly, with rates of up to 14,4% in Greece and 11% in Spain.

The European objective for social cohesion is directed at lowering to a minimum the existing differences on the regional labour market. It is rather easy to check whether the employment objectives set in Lisbon and Europe 2020 will be achieved. However, the mere analysis of these indicators will not reveal whether regional cohesion is part of achieving those objectives.

As the dispersion of these rates decreases, labor market cohesion increases. If we consider the rates of 2001, we will see the effect that the crisis had, the growth of these rates during 2008 and reversing the decline that began in 2001. From 2001 to 2008, the dispersion of unemployment rates in the EU-27 decreased significantly by 20.2 percentage points. Subsequently increased dispersion due to the crisis, and in 2012 recorded a rate of 63.2% in the EU27.

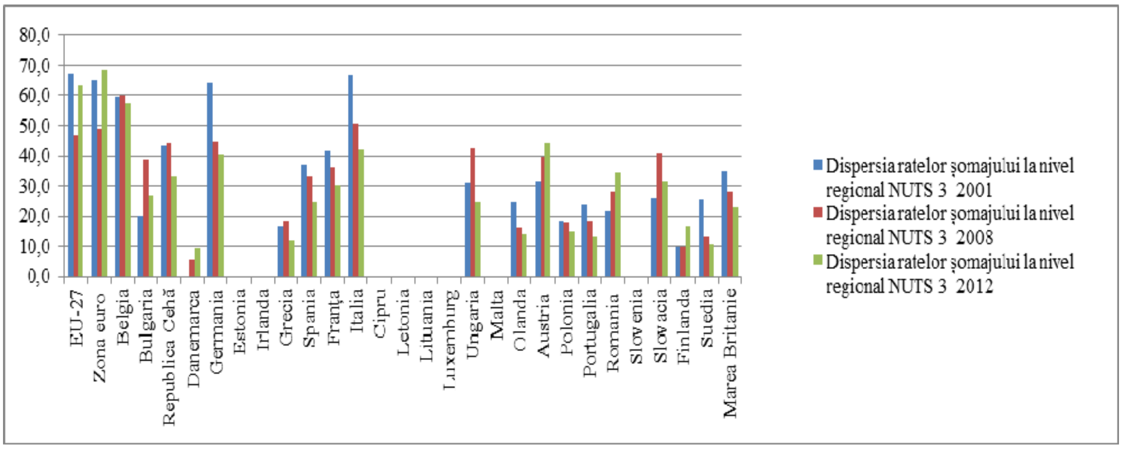

Figure.no.8 Dispersion of unemployment rates on a NUTS 3 regional level
Source: author's own, based on Eurostat data

Even though both rates have increased in 2008 on a EU-27 level, it has been proved that the dispersion within these countries has followed an opposite trend, declining in most member states. This is due to the fact that there are wide disparities as concerns the ways in which countries have reacted to the crisis. The reactions across the regions of one country were rather homogenous, while reactions across regions from different countries were relatively unequal. In most member states, the dispersion of the employment rates seems to be rather stable, while unemployment rates are more likely to vary.

According to the previous figures, the country with the highest dispersion for both rates in 2012 is Italy, with 20,5% for employment and 42,3% for unemployment. There are important differences concerning regional performance on the labour market between the north and the south of Italy. Belgium also had a higher dispersion as concerns unemployment rates, amounting to 57,5%. Denmark had the lowest dispersion rates in 2012 (9,2% for unemployment and 1,3% for employment).

2.3. ALLOCATION OF FUNDS PROCESS

A better understanding of the EU regional policy and its impact on various aspects of regional economies requires an analysis of the allocation of funds process.

Therefore, it is important to assess whether the funds are allocated in compliance with the criteria established by the European Commission.

Table no.1. Financial allocation per programming periods since 1990-2013

Financial allocations	FEDR	FSE	FEOGA	IFOP
2007-2013	270.087.000	75.604.353.000	-	-
2000-2006	225.975.652	76.120.100	56.798.282	12.469.418
1994-1999(ECU)	75 018,357	43 410,790	23 508,270	2 660,710
1990-1994 (ECU)	86.175.900	-	167.265.000	-

Source: author's own, based on Eurostat data

The European Social Fund (ESF) is believed to be one of the first funds of the European Union, originating with the Treaty of Rome in 1957. Even though increasing employment was one of its primary objectives, the ESF has constantly changed its priorities throughout the years so as to be able to meet the needs of present times. In order to consolidate economic and social cohesion in the European Union by alleviating regional disparities, the *European Regional Development Fund (ERDF)* suggests various funding sources directed at meeting the set objectives. The Common Agricultural Policy (CAP) is one of the most complex and costly EU policies. The *European Agricultural Guidance and Guarantee Fund (EAGGF)* was created in 1962 for the financial support of CAP. EAGGF handles all the loans destined for the Common Agricultural Policy, accounting for a sizeable portion of the EU budget – 50% of the budget until recently. The *Financial Instrument for Fisheries Guidance (FIFG)* was founded in 1994, combining all EU instruments related to fishing.

The Cohesion Fund helps member states with a GNP per capita below the 90% of the European average, enabling them to alleviate the disparities between the economic and social development levels and to stabilize their economies. As the EU expanded on May 1st 2004, all the new member states qualified for the Cohesion Fund.

Table no. 2. New states eligible for the Cohesion Fund 2004-2006

-mill. euro-

Czech Republic	Estonia	Cyprus	Latvia	Lithuania	Hungary	Malta	Poland	Slovenia	Slovakia
936,05	309,03	53,94	515,43	608,17	1112,67	21,94	4178,60	188,71	570,50

Source: Structural Actions 2000-2006

The Solidarity Fund of the European Union (SF) is the main instrument the EU uses to face natural disasters and to show its support for the regions afflicted by such disasters. The fund has been created as a reaction to the devastating floods that hit Central Europe in the summer of 2002.

In order to reduce economic disparities, the EU has granted financial aid to applicant countries through the *instruments for pre-accession assistance* that have played an important part in this endeavour. These pre-accession aids have been presented by the European Commission as part of the Agenda 2000 documents.

Starting with January 2007, the *Instrument for pre-accession assistance (IPA)* replaces a series of EU financial programmes and instruments destined for countries that have or might apply for accession to the EU.

Additionally, four special programmes have been created to represent EU initiatives financed from the structural funds budget. Each programme is backed by a single fund, absorbing around 5,35% of the total budget allocated for Structural Funds.

Another instrument is the European Investment Bank, which has the role to lend money for projects of European interest, such as road and rail communication routes, airports or environmental schemes. As a reaction to the statement of the European Council convened in December 1992 that promoted the recovery of the European economy, the Governing Council has decided upon creating a European Investment Fund, governed by the European Investment Bank (EIB) (62%) and the European Community, through the European Commission (29%). Moreover, EIF holds significant stakes in public or private banks and financial institutions (30 out of 17 countries, accounting for 9%).

In 2009, the EU economy has experienced the worst recession since the Second World War. GDP fell by over 4% and unemployment rose up to 10% by the end of the year. Regional policy has undergone a number of changes associated with the economic crisis:

a) The first set of changes concerns the effects on economic development and government policies. These changes are more visible in Ireland, Italy, Germany and France.

b) A second set of recent changes in policies refers to new government programmes, legislative changes or any other major domestic reassessments related to the development or enforcement of regional policies. This is to be found in Denmark, Norway, Sweden and Finland.

c) The third set of changes is directed at improving the policy efficiency and effectiveness. This is to be applied in Poland, the United Kingdom, the Netherlands, Austria, Belgium, Luxemburg and in some of the new member states.

d) The fourth set of changes in regional policies has occurred in countries where there is already a close relationship (or even harmonization) between the national and regional policies of the EU. In these cases, the changes that have occurred are highly influenced by the agenda of the cohesion policy, as is the case of Greece, Portugal, Spain and many of the new member states.

The negative effects of the crisis which began in 2007, were mitigated in the European Union by the European Economic Recovery Plan (EERP), adopted by the European Council in December 2008. This European Economic Recovery Plan proposes a counter-cyclical macroeconomic response to the crisis in the form of an ambitious set of actions to support the real economy. The objective is to avoid a deep recession.

3. CONCLUSIONS

In the analysis of the achievement and evolution of regional development process in the EU member states, we have assessed the productivity and the employment rate of workers in the period from 2001 to 2012 . Dispersion of employment and unemployment rate gives us an idea of how much, the regional rates differs from one another . As the dispersion of these rates decreases, labor market cohesion increases.

From the analysis at NUTS 2 regions level of the EU, taking into consideration the indicators of GDP and GDP/capita in the period 2000-2010, we can notice the upward trend of total GDP in all regions, in the context of emphasizing the difference between the region with the highest and the lowest level of GDP.

In conclusion, is confirmed a process of real convergence in the EU, in terms of GDP/capita, driven by the reduction of disparities process, as some of the less developed EU regions grow at a pace, faster than most developed regions. Although regional disparities in terms of GDP/capita increased in some of the member states in the period 2000-2010, almost all regions of the less developed member states have approached the EU average.

The economic crisis has had a severe impact on the economies of EU member states, each of them taking action accordingly .

BIBLIOGRAPHY

1. Dettori, B., E. Marrocu, R., Paci(2012), *Productivitatea totală a factorilor, active necorporale și dependența spațială în regiunile europene,* Studii Regionale 46.10

2. Dory, Tibor,(2008) *RTD policy approaches in different types of European regions*, Office for Official Publications of the European Communities, Luxembourg

3. . Kalvet T.(2010), *Expert evaluation network delivering policy analysis on the performance of cohesion policy 2007-2013,* Task 2: Country report on achievements of cohesion policy Estonia

4. Porfiroiu ,Marius, Profiroiu ,A., Popescu,I,(2008), *Instituţii şi politici europene,* Ed. Economică, Bucureşti

5. Puşcaşu, Violeta*,(2000) Dezvoltare regională, Edit. Economică, Bucureşti*

6. Socol Cristian., Socol A.,(2009) *Modelul european: creştere economică, convergenţă şi coeziune,* Revista Economie teoretică și aplicată , Ed. AGER, Bucureşti

7. European Commission*, Economic Crisis – the response from European Cohesion Policy, (2011),*Directorate General for Regional Policy

8. Fifth report on economic, social and territorial cohesion *”Investing in Europe’s future”*, (2010), Luxembourg, Publications Office of the European Union

9. http://epp.eurostat.ec.europa.eu, *Eurostat*