

THE CONCEPTS, METHODS AND MEASUREMENT OF EU REGIONAL DEVELOPMENT

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Abstract: *Today, the world is increasingly facing with serious differences regarding the level of economic development. Problems have surpassed the national frames long time ago and have taken a wider, global character. The undertaken measures and activities, generally, did not provide the expected effects, and regional differences continue increasing instead of decreasing.*

Discrepancies in economic development are also present in the EU. The differences are visible both, on the Union level and in individual states. The situation became more complex after the enlargement of the Union along with accession of the countries of unequal levels of development.

Spatially balanced, harmonious and stable development is one of the priorities of the EU. In this sense, the status of the region is defined normatively (NUTS methodology), strategies and methods of regional development have been adopted, and at the Union level identified as "Strategic Guidelines for Cohesion", while the member states have brought the "National Strategic Framework", or regional development programs. In addition, for this purpose many funds were established to finance business goals and priorities.

Keywords: *regional development, concepts, methods, strategies, measurement of regional development.*

1. INTRODUCTION

The development of production processes, increasing market liberalization and increased competition, resulted in creation of significant differences on the level of development, both between different countries and within countries. Accelerated expansion and promotion of the territorial approach to development in mid-fifties, had resulted in formulation of the regional science as a discipline and a research framework for the complex of geographical differences among the various segments of uniform national space, especially in the developed and industrialized countries (Devetaković S., 2002). Accordingly, the interest of economists and policy makers on regional issues and their implications, contributed to the formation and development of regional policy as one of the most complex segments of economic policy.

The term region is derived from the Latin word *regio* which means a regional area, region, zone, and the like. In the context of a particular state, regardless of its size, the region represents a rounded part of its territory. It has, on the one hand, a set of characteristics that link it with the whole country, and on the other hand, a set of (other) characteristics that make specific (Mirić O., 2009). In addition, the notion of the region may have a transnational dimension and can include the territory of several countries such as the region of Southeast Europe and some parts of the territory of different countries as Pannonian region.

The period after World War II is characterized by the appearance of a large number of regional economic integrations. Certainly one of the most important and most successful is the European Union (EU). The basics of its creation, lies in the aspirations to overcome historical rivalries, especially France and Germany, along with encouraging economic growth and development of Member States (Ilić – Gasmi G., 2004). Soon after its

establishment, the EU, due to a number of economic successes and the benefits it provides to its members, has become attractive to other European countries and an increasing number of them tried to become a part of this Union.

The economic prosperity of the Union greatly contributed efforts in order to overcoming structural disparities, both in the Member States and between them. The initiative for involving in the field of regional development was launched by Italy in mid-seventies, due to their problems with the underdeveloped South. In these efforts it had a significant support of the United Kingdom, which was itself confronted with regional problems in Scotland, Wales and the "old" industrial centers that were economically lagging behind compared to the rest of the country (Devetaković S., 2002). With the admission of new members, particularly Greece, Spain and Portugal, the regional problems were increasingly gaining the upper hand.

The idea of creating and developing the unique EU regional policy is dating from the very beginning of European integration. Namely, even in the Preamble of the Treaty of Rome the 1958 was stated that "the state - members of the European Union seek to ensure harmonious development by reducing differences in the degree of development of certain regions and the backwardness of less privileged regions" (Međak V., Majstorović S., 2004). Whereas, the regional policy of the European Union implies not only a regional development in the narrow sense, but also attempts to make connections at the Union level by reducing the existing differences in development of certain regions. Therefore, EU regional policy is often called the *cohesion policy*. It is not a substitute for regional policies of member states, but their amendment. It is the reallocation policy of major importance in almost exclusively regulatory project of European integration (Lajh, D., 2006).

2. REGION IN THE CONTEXT OF EU REGIONAL POLICY (NUTS METHODOLOGY)

The functioning of the regional policy and the system of resources redistribution from rich to poor regions directly depends on the existence of a standardized system of territorial division of the Member States in order to provide measurable and comparable data about the level of regional development. Accordingly, the EU has established a unified classification of territorial units *Nomenclature des unités territoriales statistiques – NUTS*, in order to create a uniform system of regions within the European Union. The units NUTS system are the statistical regions, which may not be an administrative unit, although the border of such units in EU Member States follow their own administrative division (Jakopin E., Perišić A., 2008).

The European Commission is based on the following principles in applying the NUTS methodology (European Commission, 2007):

1. *NUTS classification gives priority to existing administrative units.* The existing administrative units within countries are the first criterion used to define the statistical territorial units, for practical reasons related to the already existing and available information about them and with more efficient implementation of regional policies.
2. *NUTS classification favors regional units of general character.* Member States, in its regional organization, may provide territorial units specific to certain areas of activity (mining, agricultural regions, the regional labor market, etc.). NUTS favors regional units of general character in compared to this particular unit.
3. *NUTS classification is a hierarchical classification with three levels.* Namely, the NUTS classification introduces the division of each Member State on a certain number of NUTS 1 regions, each one is further divided into the corresponding NUTS 2 regions,

and those at some regions of NUTS 3 level (V. Pavlovic, 2007). Thereby, as the criteria for the classification of administrative units in any of the NUTS categories, it is applied the standard related to appropriate number of inhabitants.

Table 1 – NUTS classification

Level	The minimum number of inhabitants	The maximum number of inhabitants
NUTS 1	3,000,000	7,000,000
NUTS 2	800,000	3,000,000
NUTS 3	150,000	800,000

Namely, the first criterion from which the establishing NUTS classification starts, is the existing administrative units. If for a given NUTS level an appropriate administrative unit does not exist, then the NUTS level is constituted by connecting the required number of smaller territorial units, which takes into account other relevant criteria such as geographic, socio-economic, historical and geopolitical conditions, natural and cultural circumstances (Medak V., Majstorović S., 2004).

The classification levels, formed on that way, are used for different purposes. NUTS 1 level is used for the analysis of regional problems of the Union (effects of a customs union and economic integration at a level lower than the national), NUTS 2 level is a basic framework for the implementation of national regional policy so, therefore, it is used as a starting point for regional analysis, NUTS 2 level is a basic framework for the implementation of national regional policy, therefore the starting point for regional analysis, and NUTS 3 level mainly includes regions that are too small for complex economic analysis, but can be used as an area for the implementation of specific regional measures (Jakopin E., Perišić A., 2008).

Besides these basic levels, there are two additional levels called LAU 1 and LAU 2 (*Local Administrative Units – LAU*), which represented, before the 2003, NUTS 4 and NUTS 5. However, these units are not subject to the NUTS Regulation. The territory of the EU is divided into these levels and accordingly regions were formed in each country, also regional and sub-regional units.

Such regions set an objective basis for monitoring of regional development on the territory of the Union, for identifying those areas where it is necessary to implement instruments of regional policy, and for determining the appropriate part of the EU budget funds intended for the reduction of structural differences.

3. CONTEMPORARY CONCEPTS AND METHODS OF REGIONAL DEVELOPMENT OF EU COUNTRIES

Contemporary concepts of development underline the fact that development can not be reduced to economic development, but it includes various social and an institutional change, quality of life, human development, education and so on. Economic growth is a key factor of development but not the only one. The development is also a social phenomenon, not only increase productivity expressed by increase in GDP per capita (Bârgăoanu, A., Călinescu, L., 2009). Therefore, during the practical implementation of regional policy, coverage of the regional development concept was constantly expanding and because of that it was added to economic components (Adžić S., 2011):

1. area (in terms of detailed planning purposes and conditions of use of space),

2. natural conditions,
3. protection and improvement of environment and
4. problems of demographic, social, educational, cultural and political development.

In this way elements were added of other policies, into the domain of EU regional policy, which were not included in the traditional concept of regional policy, such as elements of social, demographic, educational and technology policy, spatial planning, policy of protection and improving the environment and the like. According to this, the modern conception of the EU regional policy complex is based on the triad:

Prerequisites - Catalysts – Accelerators

Their specific meanings are given in Table 2.

Table 2 - The key elements of the contemporary concept of EU regional development

Prerequisites	Catalysts	Accelerators
<ul style="list-style-type: none"> • Macroeconomic stability • Competitiveness • High level of education • Developed physical, IT and business infrastructure • Protection and improvement of the environment 	<ul style="list-style-type: none"> • Single market • Trade policy • Structural Funds • Cohesion Fund • Common financial institutions 	<ul style="list-style-type: none"> • Entrepreneurship, Small and Medium Enterprises • Education and training • Research and development, innovation and technology • Spatial planning

In the context of the interaction of these elements, in Table 3 the current conception of the formulation and implementation of EU regional policies complex is schematically shown.

Table 3 - Horizontal and vertical measures of the Regional, Structural and Cohesion Policy and institutional aspects of EU regional development

Horizontal measures of the Regional, Structural and Cohesion Policy	Vertical measures of the Regional, Structural and Cohesion Policy	
	Dynamic stimulation:	Pulling:
<i>Competition policy</i>	<i>Competitiveness of companies, products and processes</i>	
<i>Trade policy</i>	<i>Intra-branch trade</i>	
<i>Industrial and Technological policy (Policy on research and development)</i>	<i>IT technology innovative industry Generic growth poles Business networks and alliances Macro-clusters</i>	<i>Steel Textile Shipbuilding</i>
<i>Labor market and social policy Politics of education and training</i>	<i>Improving workforce performance</i>	
<i>Spatial planning</i>	<i>Industrial zones and technological parks Rehabilitation of gender development (industrial districts)</i>	
<i>Policy (strategy) of infrastructure development</i>	<i>Trans-European highway Power engineering Gas industry IT infrastructure</i>	
<i>Policy for development of entrepreneurship, small and medium enterprises</i>	<i>Entrepreneurship Innovative small and medium businesses</i>	
<i>Ecological policy</i>	<i>Reducing consumption of resources Reduction of waste Renewable energy sources</i>	
Institutional aspects:		
<i>Single market</i>		

<i>Structural funds, Cohesion funds</i>
<i>Strengthening of business and inter-regional cooperation</i>
<i>Institutional connections with other forms of economic policies</i>
<i>Social dialogue</i>

Source: S. Adzic, *Regional economy of the European Union*, University of Novi Sad, Faculty of Economics Subotica, 2011.

On the basis of this table, one can have insight into the basic directions of the regional development of European Union for 2007-2013. Namely, at the EU level, for this programming period, it was introduced a document called *Community Strategic Guidelines – CSG* which is the starting point for defining the national versions of Member States regional policies, based on so-called *Integrated Guidelines for Growth and Jobs – IGGJ*.

On the basis of such *Community Strategic Guidelines* Member States have enacted their regional development programs named *National Strategic Reference Framework – NSRF* which highlights the investment priorities for the new generation of regional and sectoral programs, which will be supported by the EU in the coming seven-year programming period. It defines in detail the national strategies and methods of regional development, for each member state separately, the target regions and expected effects (European Commission, 2007). In the second part of this document there is a list of operational plans for implementation of the regional policy (in the programming period 2007-2013 over 420 operational plans are planned to be implemented).

National strategic frameworks for all Member States are formulated in accordance with one of the following approaches:

1. *Top-down approach* - Government prepares, appropriate documents and their final shaping is done in consultation with representatives of the region. National authorities set the limits of authority to the lower levels of government. The main disadvantage of this approach is reflected in the fact that the central national government does not take into account the objectives and efforts of lower levels, while the advantage of this method is that it is less time consuming (Kocziszky G., 2009). This approach to creation of national regional development strategy is used in Spain, Denmark, Greece, Holland, Ireland, Luxembourg, Portugal and the new member states.
2. *Bottom-up approach* - The lower levels of government are engaged in making preliminary plans of regional development, in line with the real needs of the region and the central government on that basis make the final version of these plans. This is a democratic approach of making the operational plans, but the process of plan making is more time consuming. (Kocziszky G., 2009). Unlike the previous approach where the planning process includes several people, this approach involves a large number of persons whose interests may be opposed. Besides that, this approach requires a greater expenditure (Thierstein A., Walser M., 1997). The countries where this approach is applied are Belgium and FR Germany.
3. *Counter-flow approach* - This approach combines the two previous approaches which allow to overcome disadvantages and highlight the benefits of the previous two approaches, through the interoperability of higher and lower levels of government. This approach is typical for Austria, Finland, France, Italy, Sweden and the UK.

4. MEASUREMENT OF REGIONAL DEVELOPMENT IN THE EUROPEAN UNION

The European Union, despite many measures of regional policy, is still characterized by significant differences in the level of development among member states as well as within them. The most frequently used indicators in the regional analysis are GDP at Purchase Power Standard – PPS, in absolute terms and as certain indices and coefficients, and the unemployment rate.

When establishing the Union, it was thought that the existence of any regional policy is not necessary, because the free flow of goods, capital; people and services would automatically reduce disparities between Member States and their internal regional disparities. But, very soon it was turned out that these forecasts were too optimistic. At the time of initiating the common regional policy in 1975, the biggest difference in GDP per capita (calculated according to domestic purchasing power parity) between regions amounted to 7:1, between the Free City of Hamburg in Germany and the area of Calabria in Southern Italy (Adžić S., 2011). Over time, such a situation was even more deteriorated, especially after the next three accession rounds. Disparities in the level of development of some regions in the EU, in 2006, before the fifth round of enlargement can be seen in Table 4, which gives an overview of GDP per capita (PPS) at the EU-27.

Table 4 - GDP per capita (PPS) in some European regions in 2006

Region	GDP per capita (PPS)	Index GDP per capita (PPS) EU-27=1
<i>The narrow London (UK)</i>	79,400	335.9
<i>Luxembourg</i>	63,100	267.1
<i>Region of Brussels (Belgium)</i>	55,100	233.3
<i>Hamburg (Germany)</i>	47,200	199.7
<i>Groningen (The Netherlands)</i>	41,000	173.7
<i>Ile de France (France)</i>	40,100	169.7
<i>Prague (Czech Republic)</i>	38,400	162.3
<i>Lombardy (Italy)</i>	32,000	135.3
<i>Corsica (France)</i>	20,300	85.8
<i>Scylla and Cornwall (UK)</i>	18,300	77.6
<i>Campaign (Italy)</i>	15,600	66.1
<i>Southwestern Region (Bulgaria)</i>	13,500	57.1
<i>The southeast region (Bulgaria)</i>	7,400	31.5
<i>South-West Oltenia (Romania)</i>	7,200	30.4
<i>South Central region (Bulgaria)</i>	6,600	27.8
<i>North Central Region (Bulgaria)</i>	6,400	26.9
<i>Northwest Region (Bulgaria)</i>	6,000	25.4
<i>EU-27</i>	23,600	100.0

Source: Eurostat

According to the data from Table 4 it can be concluded that the differences in GDP per capita (PPS) between observed regions in 2006, before the accession of Romania and Bulgaria, were very large, even 13:1 between the best and worst ranked regions. In addition, some authors point out that these differences were larger, even 20:1. GDP per capita (PPS) of the most developed regions (Inner London in the UK) was over three times higher than the average of the Union, while GDP per capita (PPS) of the most undeveloped regions (North West region of Bulgaria) was only a quarter of EU average.

Besides the differences among individual regions in different Member States, there are great differences in GDP per capita (PPS) within each of the Member States. In most

countries, these differences were greatest between capital city regions and the peripheral regions. This rule can be applied to the developed old members (Britain, Germany, France, Italy, Spain and others), as well as the transition economies, with "traditional" unbalanced development, which have recently accessed the EU. A number of countries of the Union are characterized by disproportion of development greater than 2:1. Thus, in the UK, a country with the largest disparities, London as the most developed region has 4.3 times higher income than most undeveloped Cornwall. In France and Italy, Ile de France and Lombardy, are twice more developed than Corsica or Campaigns. In Bulgaria, these disparities approximate and Southwestern region was 2.2 times more developed than the poorest Northwestern region (Todoric J., 2009). The development disparities are large also if the differences are considered among Member States, especially after the fifth round of enlargement in 2007, when Bulgaria and Romania accessed the EU. Table 6 presents the indicators of development in the Member States after the fifth enlargement of the 2008.

Table 5 - Basic data on the development the EU Member States in 2008

Countries	GDP per capita PPS (in EUR)	Unemployment rate (in %)	Index GDP per capita EU-27=1	Index of unemployment rate EU-27=1
Belgium	32,200	7.0	1.15	1.00
Bulgaria	4,500	5.6	0.40	0.80
Czech Republic	14,200	4.4	0.80	0.63
Denmark	42,400	3.3	1.18	0.47
Germany	30,400	7.3	1.16	1.04
Estonia	12,000	5.5	0.67	0.79
Republic of Ireland	40,900	6.0	1.39	0.86
Greece	21,300	7.7	0.95	1.10
Spain	23,900	11.3	1.04	1.61
France	30,400	7.8	1.07	1.11
Italy	26,300	6.8	1.00	0.97
Cyprus	21,700	3.7	0.95	0.53
Lithuania	10,200	7.5	0.56	1.07
Latvia	9,600	5.8	0.61	0.83
Luxemburg	80,500	4.9	2.53	0.70
Hungary	10,500	7.8	0.63	1.11
Malta	13,800	6.0	0.76	0.86
Netherlands	36,200	2.8	1.35	0.40
Austria	33,800	3.8	1.23	0.54
Poland	9,500	7.1	0.58	1.01
Portugal	15,700	7.7	0.75	1.10
Romania	6,500	5.8	0.46	0.83
Slovenia	18,400	4.4	0.90	0.63
Slovakia	12,000	9.5	0.72	1.36
Finland	34,800	6.4	1.15	0.91
Sweden	35,400	6.2	1.21	0.89
United Kingdom	29,600	5.6	1.17	0.80
EU-27	25,100	7.0	1.00	1.00

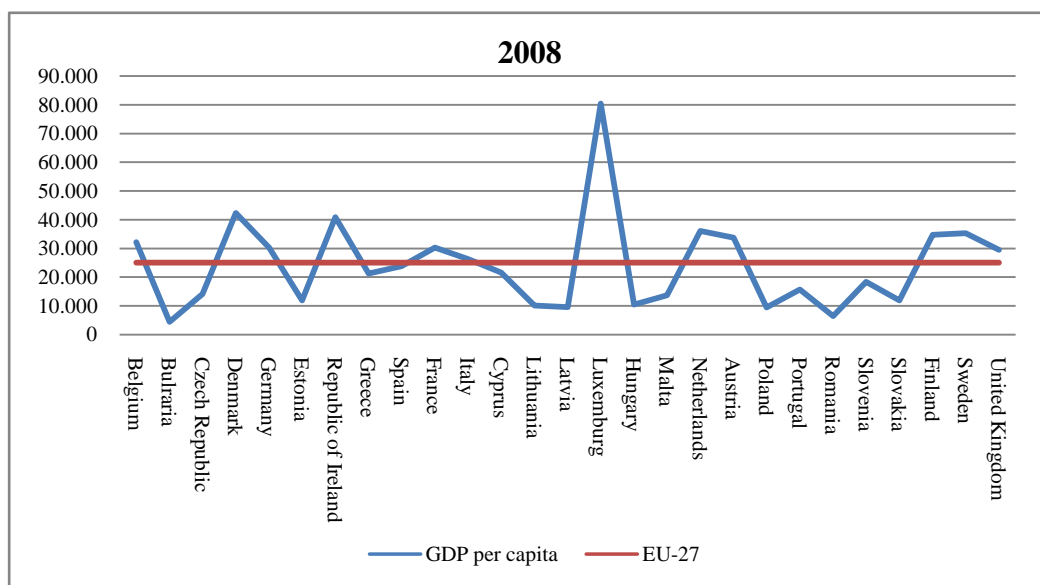
Source: Eurostat

After the fifth round of enlargement, regional disparities in the EU have increased significantly. In Luxembourg, realized GDP per capita was 2.53 times greater than the average of the EU, while in Bulgaria it was only 0.4 of EU average. GDP per capita in Luxembourg was, at the same time, about 18 times higher than that achieved in Bulgaria. Beside that, it should be noted that even 14 countries had a GDP per capita below the EU

average, which suggests that measures of regional policy have not provided the expected results yet.

If analyzing the unemployment rate in the Member States it can be concluded that there is less variation than in the case of GDP per capita. In nine Member States the unemployment was above the EU average, but only in Spain and Slovakia the difference was much greater. In the remaining seven countries, these differences did not exceed 12%. In the Netherlands, the unemployment rate was 60% lower than the average of the Union, while Spain's unemployment rate was 60% above average, and the relationship between unemployment rates in these countries was 4:1.

In order to come to a conclusion if the regional policy measures achieved some improvement in the period after 2008, the figures 1.a and 1.b shows the variation of GDP per capita compared to EU average in 2008 and 2010.



Based on the presented chart one can notice that in 2010 the situation has not changed significantly compared to 2008, given that these two graphs are almost identical. All this suggests that EU regional policy measures still do not give the desired results and that the disparities among Member States are still high.

5. CONCLUSION

The common EU regional policy aims to level the economic development of countries and regions in the territory of the Union. For several decades, it has been one of the most important policies, as an instrument of financial solidarity and cohesion of the EU, which accounts for a large part of its budget.

Knowledge, technology and capital are the factors of success in the European countries and their regions are increasingly developing. However, economic and human resources are limited and often insufficient in many areas and regions. In this situation, the competitive struggle for these key resources becomes more intense. Global competition, investment in R & D and education, reduce the competitive advantage of European regions. Therefore, to remain among the leading countries in the global knowledge economy, European regions have to cooperate among themselves, but also with their competitors. In accordance with the EU, along with the implementation of traditional measures of macroeconomic policy,

new methods of regional development based on microeconomic theory have been developing. In this sense, four regional development methods were singled out, which are the basis for measures of regional policy: encourage and support intensifying entrepreneurial efforts and activities, improve the market competitiveness of enterprises, encourage and support entrepreneurial efforts and intensifying activities, improve the market competitiveness of enterprises, support the emergence of new (driving) industry in the region and improve the business infrastructure. The implementation of these methods requires of a European region to create new and enhance existing links between research centers and entrepreneurial firms to invest in science and education, R & D, business infrastructure, technology transfer and facilitate access to resources (particularly financial resources and information).

Despite significant investments in the balanced regional development, there are still large regional differences not only among regions but also among the EU member states. The differences are, of course, the largest between the developed old members and those that have only recently joined the Union. However, the impact of regional policy should not be underestimated, nor overestimate. It has never represented the driving force of the economic development, but assistance to the effects of free single market. Only synergistic effect of these and other national and supranational policy creates opportunities for prosperity across the region, Member States and the EU as a whole.

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