REGIONAL DISPARITIES OF ECONOMIC GROWTH IN THE ENLARGED EUROPEAN UNION

Goschin Zizi

Academy of Economic Studies, Bucharest, Department of Statistics and Econometrics, Sos. Ştefan cel Mare nr.4, bl. 14, sc.B, ap.52, et.4, sect.1, Bucureşti, Tel. (021)210 75 37, Email: zizigoschin@yahoo.com

Danciu Aniela-Raluca

Academy of Economic Studies, Department of Statistics and Econometrics, Bucharest, Calea Dorobanti, 14-15, Tel. 3191901/int.363, Email: anielaco@hotmail.com

Gruiescu Mihaela

Romanian-American University, Bucharest, Calea Călăraşilor, nr.176, bl. 59, sc. C,et. 3, ap.13, sect.3,Bucureşti, Tel. 0744 526 609, Email: mgruiescu@yahoo.com

Abstract. The enlargement of the European Union by the entry of 10 new Member States in 2004 and another two in 2007 led to a significant rise of the economic regional disparities both in absolute and in relative terms. There are considerable and persistent regional contrasts between the old and the new Member States, although many of the regions with a low GDP per inhabitant in the new Member States are catching up fast due to a higher dynamics of economic development. There are some regions under EU-27 average growth rates of GDP per inhabitant, all them belonging to three NMS: Romania, Czech Republic and Bulgaria. Disparities in the levels of development in the enlarged European Union imply the need for assistance on the least developed regions and Member States, by means of an appropriate allocation of structural and cohesion funds.

Key words: regional disparities, regional growth, convergence objective, European Union, Romania.

Increase in regional disparities following the EU enlargement

The enlargement of the European Union by the entry of 10 new Member States (NMS) in 2004 and another two in 2007 led to a significant rise of the economic regional disparities. Gross domestic product per inhabitant (in PPS) become about five times higher in the top 10 % regions than in the bottom 10 % of the EU-27, compared to less than three times bigger in the EU-15 (Eurostat data, 2007). The ratio between GDP per inhabitant in the top and bottom 25 % regions also moved upwards as a result of the enlargement, rising from two to three and the average GDP per inhabitant in EU-27 reduced by almost 12 % compared to EU-15 (Eurostat data, 2004). These synthetic measures of disparities, combined with the regional distribution of wealth among NUTS 2 regions in Map 1, are giving an overview of EU-27 development inequalities.

Map 1. GDP per inhabitant in PPS (% of EU 27) 2004
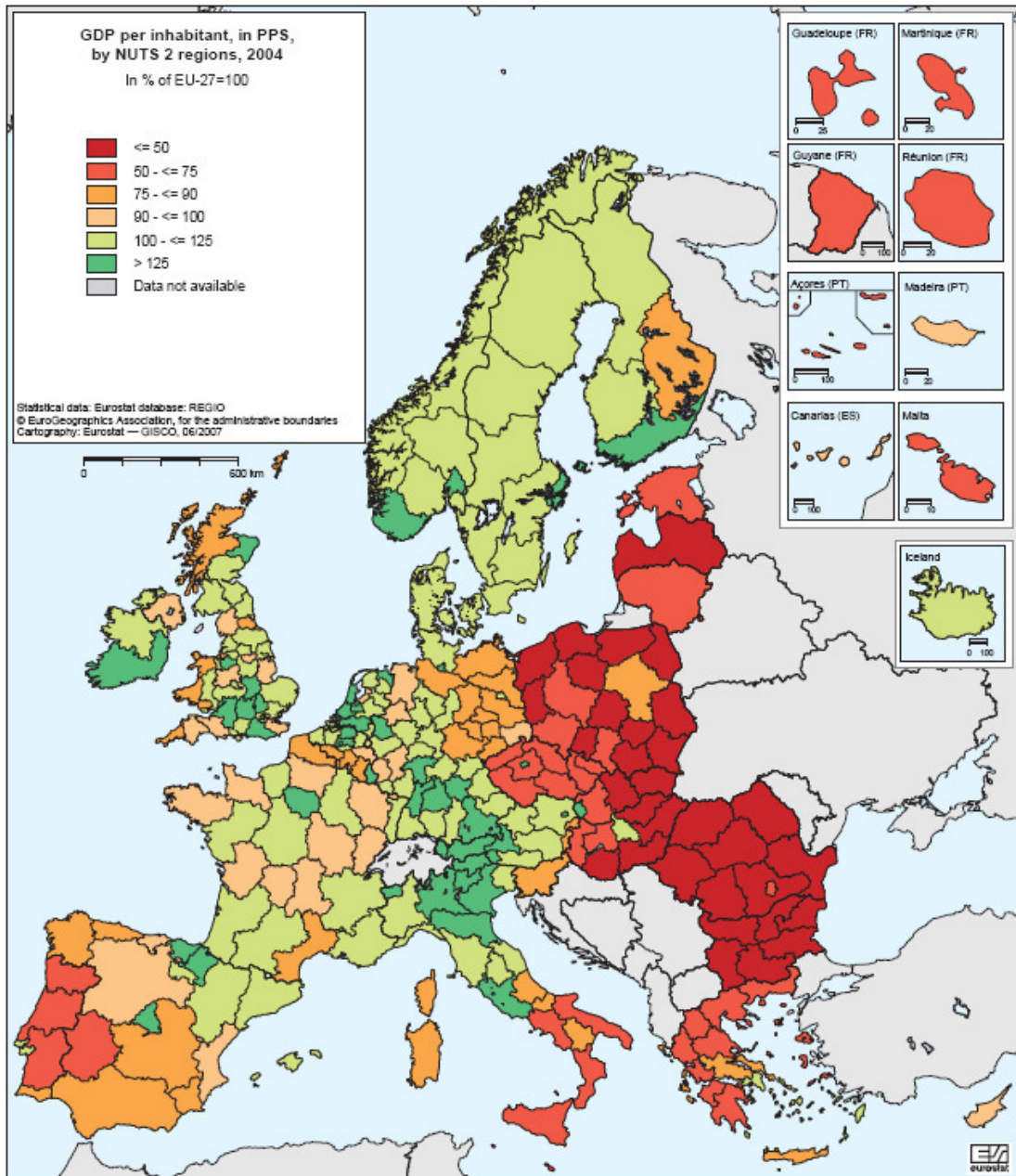
Source: Eurostat Regional Yearbook 2007

By using regional GDP per inhabitant (in PPS) relative to EU-27 average as a measure of economic development, we find a very large gap separating the 302.9% for the richest region - Inner London (in UK)- from the 23.58% of the poorest one- North-East Romania. Moreover, in most of the new Member States regions GDP per inhabitant is considerably smaller than in EU-15 regions, lying below 50 % of the EU-27 average in 31 regions out of a total 55 regions in NMS. There are only a few exceptions, Prague region in the Czech Republic reaching the highest GDP per capita (157% of the EU-27 average) in the NMS regions.

In order to measure the economic discrepancies we used Gini Inequality Index (GI), a statistical indicator initially employed for the analysis of income differences between individuals, but also appropriate for the territorial disparity measurements. Gini Inequality Index (GI) is given by the formula:

$$GI = \frac{\sum\limits_{i=1}^{n}(2i-n-1)\cdot x_i}{n\sum\limits_{i=1}^{n}x_i} \; ,$$

where x_i represents the regional values of the variable, in a non-decreasing order, and n is the number of regions. The values of Gini Inequality Index strongly amplified following EU last two enlargements, reaching a level of 0.2083 (2004 data). This is the consequence of higher discrepancies among the NMS than within EU-15 countries as proved by an overall value of 0.2286 for the Gini Inequality Index within the 12 new Member States NUTS 2 compared to the considerably lower 0.1478 value for the regions in the EU-15 countries (authors' own calculations). The development gap between NMS as a group and EU-15 states also added to this result. Within each individual country inequalities are notably lower (see Table 1, column 4).

*Table 1. Statistic measures of economic disparities and convergence objective funding*

Country	GDP per inhabitant in 2004, Euro PPS	Highest / lowest regional GDP per inhabitant in 2004	Gini Inequality Index in 2004	Structural and cohesion funds, 2004-2006 mil euro	Indicative convergence allocations 2007-2013 mil euro
1	*2*	*3*	*4*	*5*	*6*
Bulgaria	7200	1.917	0.119	-	6674
Czech Republic	16400	2.628	0.155	2404	25883
Estonia	12300	-	-	615	3404
Cyprus	19700	-	-	108	213
Latvia	9800	-	-	1031	4531
Lithuania	11000	-	-	1379	6775
Hungary	13800	2.426	0.173	2837	22890
Malta	16400	-	-	81	840
Poland	11000	2.184	0.109	11202	66553
Romania	7200	2.734	0.159	-	19213
Slovenia	18300	-	-	423	4101
Slovakia	12200	3.054	0.246	1544	10912

Sources: Eurostat, 2007 and author's calculations

The economic dynamics in EU-27 and the catching up process

The increased economic development disparities in the European Union due to the entry of the NMS are counterbalanced by encouraging high dynamics of growth in these countries, leading to a steady trend towards narrowing the development gap. Map 2 captures the variation in economic dynamics in the 268 NUTS 2 regions of EU-27, measured by the annual average GDP growth by region considering the overall 1995-2004 period.

Map 2. Annual average GDP growth in EU-27 by NUTS 2 level over 1995-2004
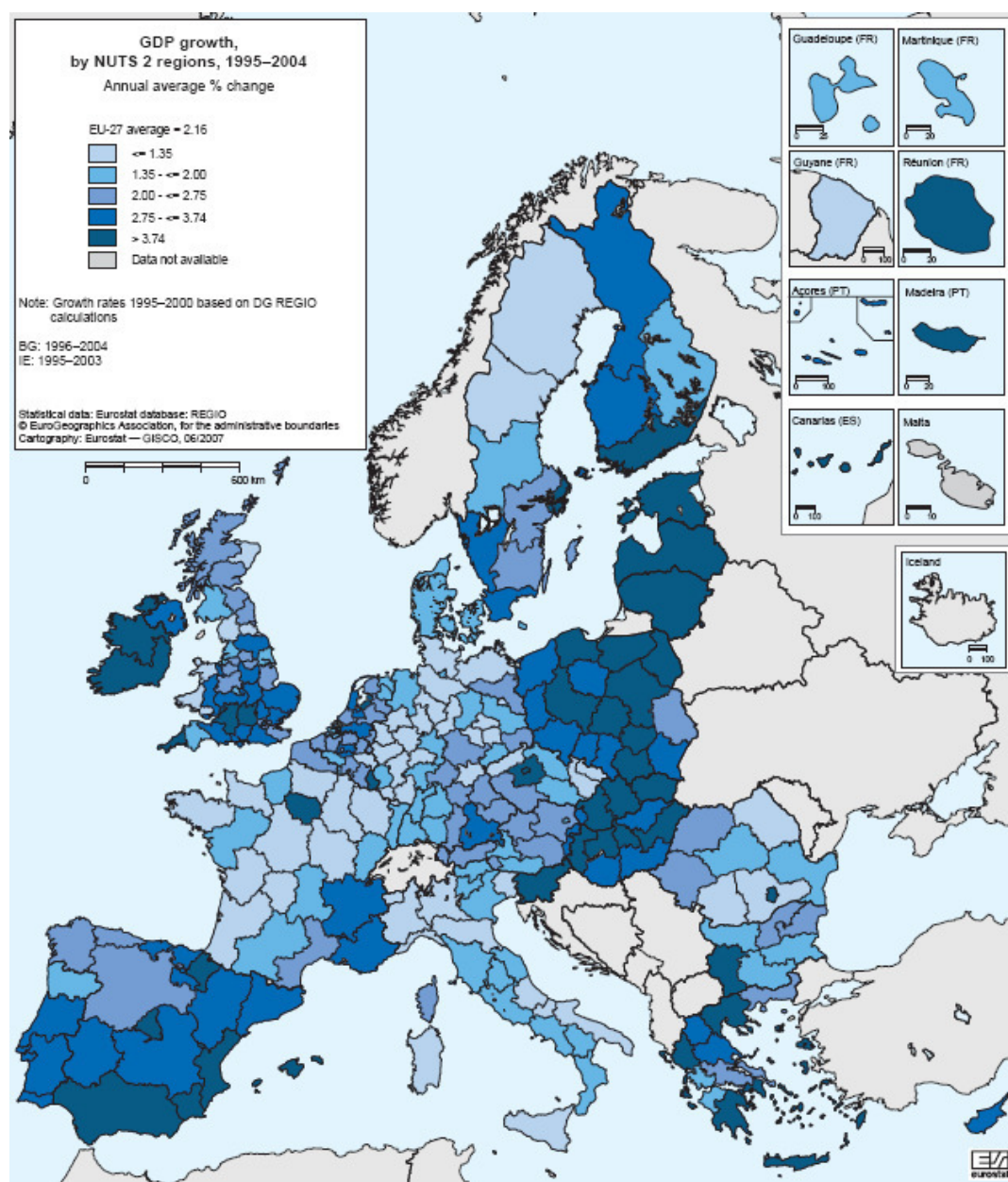
Source: *Eurostat Regional Yearbook 2007*

The highest rates of growth in the new Member States was recorded in the three Baltic States (above 6% average annual real GDP growth), followed by Poland, Slovakia, Hungary, Slovenia and Cyprus. Even the newest two Member States, Bulgaria and Romania, recovered after the long economic decline in the 1990s, achieving substantial growth rates after the year 2000.

This above the average growth trend is leading to a rapid catching up process for many less developed regions in NMS. Although the time perspective considered when addressing processes of convergence at the European scale is too short, one can already see some signs of convergence. Eurostat statistical analysis revealed regional convergence at the EU-27 level based on the last years decreasing values of both Gini coefficient and the coefficient of variation (Eurostat, 2007). This proves that the initial increase in inequalities brought about by the enlargement of the EU was soon followed by a decreasing trend based on the bigger growth rates in most of the NMS. Economic convergence between the regions of the EU-27 in the last years is also proved by the fall in the ratio of GDP per inhabitant in the richest region -Inner London in UK- and the poorest one -North-East Romania- from 13.9:1 in 2002 to 12.8:1 in 2003 and 2004. Another encouraging evolution is the reduction in the number of regions with GDP per inhabitant lying below 40% of the EU-27 average: from 23 in 2002 to 21 in 2003 and 17 in 2004.

As in the past, the disparities in economic levels of development measured in GDP, have been significantly reduced between the EU-15 Member States and the former 'cohesion countries' (Greece, Spain, Portugal and Ireland) there is hope of simply reproducing, across the NMS, the levels of economic development successfully achieved in the past evolution of these countries.

According to Eurostat data the NMS are catching up with the EU-27 average growth at a rate of 0.8 percentage points per year (Eurostat, 2006). Unfortunately, there are still 15 of the 55 regions in the NMS growing at a rate of less than two percents annually, which is the EU-27 average dynamic. All these regions belong to three of the new Member States: Romania, Czech Republic and Bulgaria.

Regional differences within countries

The variation in dynamics of economic development among the regions in one country can diverge almost as widely as among regions in different countries, as Map 2 points out. The highest gap is experienced by Romania, a country where the GDP per inhabitant - increased six times faster in the most developed region –Bucharest-Ilfov compared to the least developed one – North-East. In the new Member States, the highest regional GDP per inhabitant in a country is two to three times bigger than the lowest one (Table 1, column 3), regional differences reaching the peak in Slovakia.

Most of the NMS are characterised by a marked economic dominance of their capital regions which concentrate most of the economic activity in the country, thus increasing the development gap. In all the NMS and in some of EU-15 countries the capital regions, have the highest GDP per inhabitant (see Map 1), a substantial share in the national economy, and bigger rates of growth. The bigger GDP per inhabitant mainly results from the notably higher productivity than in the rest of the regions. In-commuting, which provides larger labour force relative to the inhabitants of the capital region, is another explanation of their considerable economic power.

Map 3. Typology of performance of the EU-27 regions in 2000
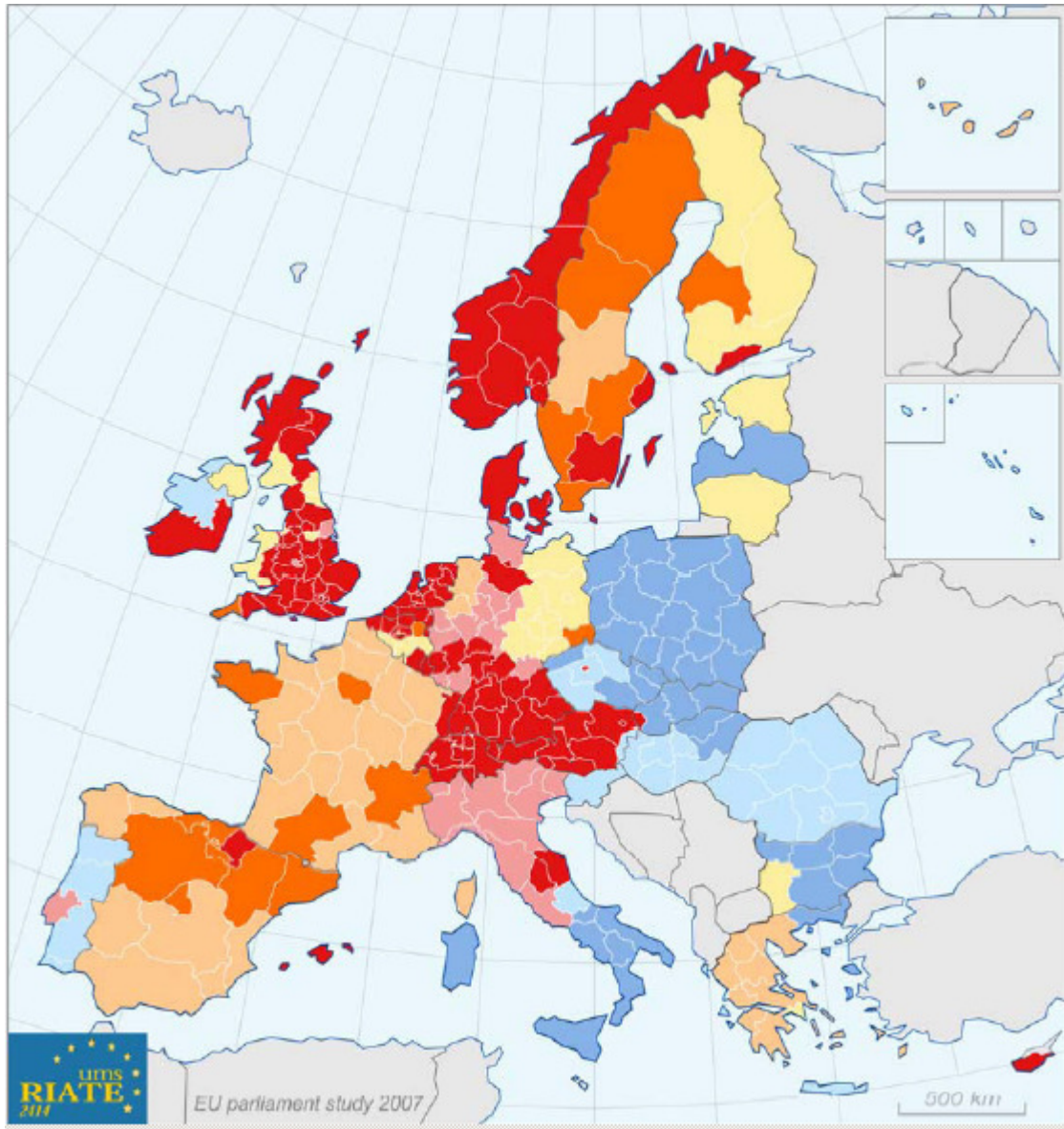
Source: European Parliament, 2007

Hig-2	
Hig-1	
Med-3	
Med-2	
Med-1	
Low-2	
Low-1	
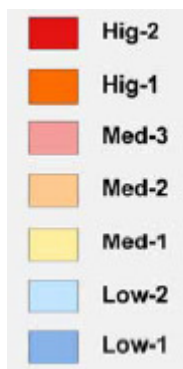
A hierarchical cluster analysis (European Parliament, 2007) for the 268 regions in the EU-27 reveals the existence of 7 types of regions (Map 3) each group having some main characteristics.

• **Type Low-1** (regions in Poland, Slovakia, Bulgaria and Southern Italy) indicates a very negative situation on all parameters and clearly identifies the most lagging regions in Europe, characterised by very low GDP per capita, high unemployment, low life expectancy and relatively low levels of education.

• **Type Low-2** is very similar to previous type Low-1 but with has the advantage of a relatively low level of unemployment rate. However the performance is smaller for indicators such as education or life expectancy.

• **Type Medium-1** is characteristic of regions with low-medium situations across all criteria except education. Displaying better levels of highly skilled labour force, these regions could base their future development on this specific advantage.

• **Type Medium-2** is also characteristic of regions with a medium situation in respect of GDP per capita and education, higher levels of life expectancy, but specific weakness relating to employment. They should therefore focus on the reduction of unemployment without diminishing the of social provisions indirectly revealed by the good life expectancy.

• **Type Medium-3** is comprising regions which are generally considered as being "without problems" as they have high levels of GDP per capita and relatively small unemployment. These regions are characterised by rather poor performances in respect of life expectancy and the share of people with a high level of education. Regional policy here should therefore focus mainly on the development of infrastructures for health and education.

• **Type High-1** includes regions with good global performance on all criteria, except employment, higher than the EU average. These regions can generally rely on good social conditions relatively high economic competitiveness. As in the case of type Medium-2 regions, their problem is how to reduce unemployment without breaking the good level of performance in respect of the other criteria.

• **Type High-2** is also experiences good global performance on all criteria but with some differences as compared to type High-1. The situation is clearly better in terms of employment (low levels) and slightly better in terms of GDP per capita. Performance levels are clearly less good than type High-1 however in respect of life expectancy and education.

Final remarks

Large regional disparities in the levels of economic development already existing in the European Union were enhanced because of the last two enlargements, thus increasing the need for assistance especially for the least developed regions and Member States. Consequently the convergence objective was designed for the next programming period - 2007-2013 - as a tool for reducing the amplitude of the inter-regional disparities, by means of an appropriate allocation of structural and cohesion funds.

Many of the regions with a low GDP per inhabitant in the new Member States are catching up fast, as was revealed by Eurostat periodic statistical analysis and confirmed by our own calculations of Gini Inequality Index. Economic convergence between the regions of the EU-27 significantly improved in the last years, based on significant above-average growth rates in most of the NMS and this trend is expected to continue if the NMS will be able to successfully make use of the structural financial assistance associated to the cohesion policy.

APPENDIX

Country/Regions	GDP per inhabitant, in PPS, 2004 (in % of EU-27=100)	Annual average % change in GDP 1995-2004	Objectives*
Bulgaria			
BG31 Severozapaden	25,5895	1,40	Conv
BG32 Severentsentralen	26,42142	2,03	Conv
BG33 Severoiztochen	29,29375	2,73	Conv
BG34 Yugoiztochen	29,85669	2,00	Conv
BG41 Yugozapaden	49,06268	4,94	Conv
BG42 Yuzhen tsentralen	25,6211	1,90	Conv
Czech Republic			
CZ01 Praha	157,1132	3,83	RCE
CZ02 Střední Čechy	69,86933	3,83	Conv
CZ03 Jihozápad	69,58104	2,03	Conv
CZ04 Severozápad	60,68463	0,28	Conv
CZ05 Severovýchod	63,65526	1,46	Conv
CZ06 Jihovýchod	67,3529	1,86	Conv
CZ07 Střední Morava	59,78916	1,32	Conv
CZ08 Moravskoslezsko	61,11449	1,23	Conv
Estonia EE00 Eesti	55,70194	6,83	Conv
Cyprus CY00 Kypros/Kıbrıs	91,3755	3,45	PI
Latvia LV00 Latvija	45,4593	6,37	Conv
Lithuania LT00 Lietuva	51,06963	6,04	Conv
Hungary			
HU10 Közép-Magyarország	101,5528	4,99	PI
HU21 Közép-Dunántúl	61,14363	5,52	Conv
HU22 Nyugat-Dunántúl	66,77693	5,16	Conv
HU23 Dél-Dunántúl	45,62485	3,18	Conv
HU31 Észak-Magyarország	42,49484	3,56	Conv

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HU32 Észak-Alföld	41,86695	4,03	Conv
HU33 Dél-Alföld	44,15043	2,93	Conv
Malta MT00 Malta	74,35278	-	Conv
Poland			
PL11 Łódzkie	46,73357	4,27	Conv
PL12 Mazowieckie	76,84177	6,18	Conv
PL21 Małopolskie	43,36250	4,23	Conv
PL22 Śląskie	57,01667	3,53	Conv
PL31 Lubelskie	35,19549	2,70	Conv
PL32 Podkarpackie	35,42153	3,45	Conv
PL33 Świętokrzyskie	39,26442	4,02	Conv
PL34 Podlaskie	37,89028	3,92	Conv
PL41 Wielkopolskie	54,54114	5,88	Conv
PL42 Zachodniopomorskie	47,19911	2,84	Conv
PL43 Lubuskie	45,41177	3,48	Conv
PL51 Dolnośląskie	51,67907	3,68	Conv
PL52 Opolskie	43,61174	2,79	Conv
PL61 Kujawsko-Pomorskie	45,37136	3,15	Conv
PL62 Warmińsko-Mazurskie	39,3841	3,97	Conv
PL63 Pomorskie	49,56785	3,96	Conv
Romania			
RO 11 Nord-Vest	32,98676	2,34	Conv
RO 12 Centru	35,47916	1,77	Conv
RO 21 Nord-Est	23,57835	0,73	Conv
RO 22 Sud-Est	30,74909	1,36	Conv
RO 31 Sud — Muntenia	28,41957	0,92	Conv
RO 32 Bucureşti — Ilfov	64,46439	4,50	Conv
RO 41 Sud-Vest Oltenia	28,75252	0,89	Conv
RO 42 Vest	39,04176	2,39	Conv
Slovenia SI00 Slovenija	83,33668	3,92	Conv
Slovakia			
SK01 Bratislavský kraj	129,2922	3,43	RCE
SK02 Západné Slovensko	52,71793	3,98	Conv
SK03 Stredné Slovensko	46,6664	3,89	Conv

SK04 Východné Slovensko	42,33092	3,81	Conv

Sources: **Eurostat regional yearbook 2007,** Eurostat and DG Regional Policy estimates

* Categories:

Conv   *Convergence regions*

PO   *Phasing-out regions*

PI   *Phasing-in regions*

RCE   *Competitiveness and employment regions*

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