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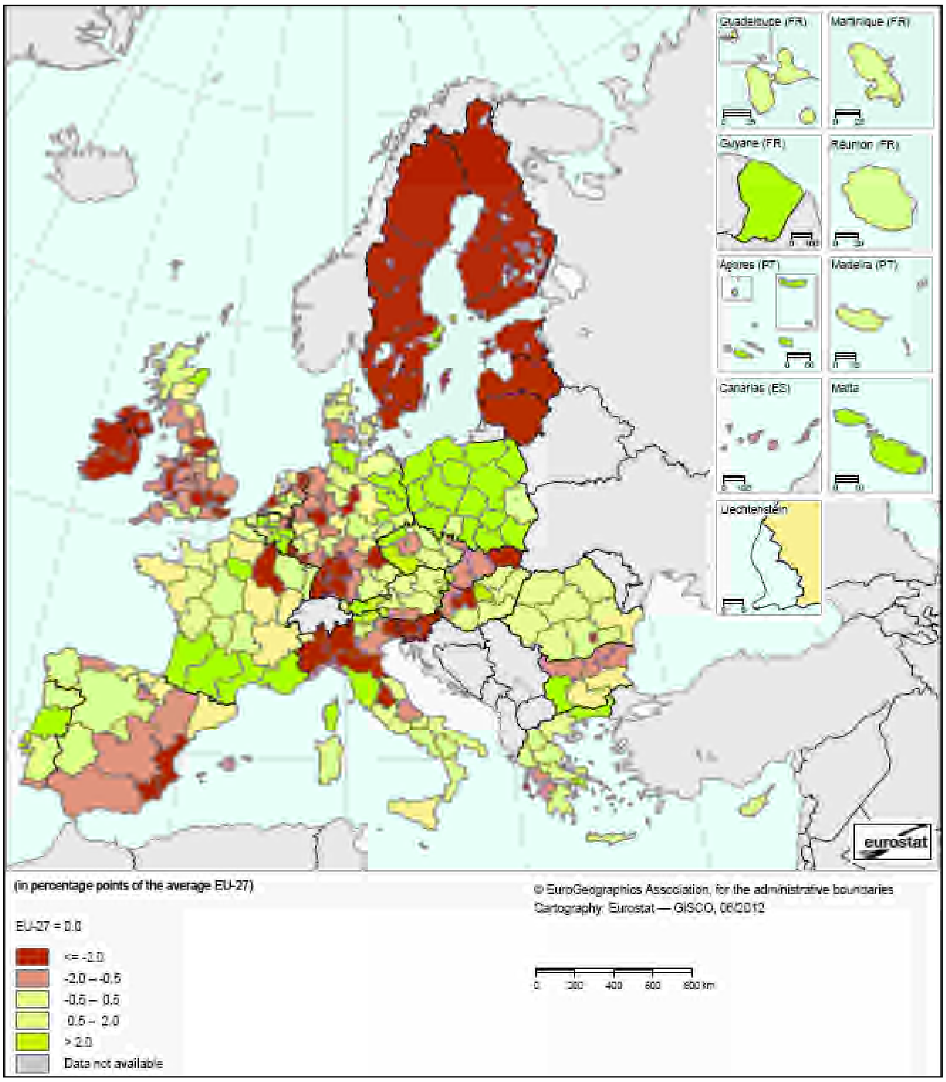
Regional Gross Domestic Product dropped sharply in 2009, but not all regions were hit in the same way

Regional Gross Domestic Product (GDP) in purchasing power standards (PPS) per capita dropped sharply in 2009 compared with 2008 in all Member States except Poland. Most affected were areas with a high dependence on manufacturing, construction and exports (including tourism). Capital city regions and the areas with the lowest per capita GDP suffered smaller setbacks than the EU-27 as a whole.

Map 1: Change of gross domestic product (GDP) per capita in purchasing power standards (PPS), by NUTS 2 regions, 2009 as compared with 2008 (in percentage points of average for EU-27)



Source: Eurostat (online data code: nama_r_e2gdp)

Recession hits less in strongest and weakest regions

Map 1 shows the extent to which regional per capita GDP changed between 2008 and 2009, compared with the EU-27 average (expressed in percentage points of the average for the EU-27). Regions whose per capita GDP increased by more than 0.5 percentage points compared with the EU-27 average are shown in green. By contrast, regions whose per capita GDP fell back by more than 0.5 percentage points compared with the EU-27 average are shown in red.

It should, however, be borne in mind that the EU-27 average of GDP per capita (in PPS) dropped by 6 % between 2008 and 2009, and that virtually all regions which did better than the EU-27 average still recorded decreases in absolute values. Poland is the only notable exception, with 11 out of 16 regions achieving absolute increases.

Map 1 shows that the 271 NUTS 2 regions of the EU-27 experienced the recession very differently. The strongest drops occurred in the Baltic States, Finland, Sweden, Slovakia, Slovenia and Ireland, as well as in the industrial centres of Northern Italy, Western Germany and the UK. In Spain, the Mediterranean regions Comunidad Valenciana and Murcia, both of which depend heavily on construction and tourism, had particularly sharp setbacks.

On the other hand, many regions with low levels of per capita GDP recorded a smaller downturn than the EU-27 average. This applies in particular to southern Italy and eastern Germany, central and north-western Spain, as well as Romania and the Czech Republic.

Closer examination confirms that both the most prosperous regions and those with the lowest per capita GDP coped better with the economic shock of 2009 than other regions. The top 20 regions of the EU-27, which accounted for 8.9 % of the population in 2008 and 8.4 % in 2009, recorded a per capita GDP of 177 % of the EU-27 in 2008 and of 180 % in 2009. This means that, while the EU-27 average of GDP per capita (in PPS) dropped by 6 % between 2008 and 2009, the 20 most affluent regions experienced a fall of just 3%.

The relatively good performance of this group is somewhat unexpected, as it includes the EU-27's three major financial centres, London, Frankfurt and Luxembourg, all of which suffered strong setbacks in financial services because of the financial crisis. However, these losses were partially outweighed by other industries and regions with more diversified economies, such as Brussels, Hamburg, Bratislava, Prague, Vienna, Stockholm and Ile-de-France.

The 20 least prosperous areas, which were home to 7.2 % of the EU-27 population in both 2008 and 2009, also suffered lesser setbacks than the EU-27 average in 2009, but their performance was weaker than that of the top 20. The group achieved a per capita GDP of 38 % of the EU-27 average in 2008 (2009: 39 %). This means that, while the EU-27 average of GDP per capita (in PPS) dropped by 6 % between 2008 and 2009, it decreased by around 5 % for the 20 least prosperous areas. These regions were comparatively less affected by the recession because their economies have a relatively low share of financial services, exports and tourism. The regions in this group were the same in both 2008 and 2009, and all of them are situated in Bulgaria, Romania, Poland and Hungary.

We can thus conclude that the recession of 2009 was felt most severely in the mid-range regions with GDP values between 50 and 150 % of the EU-27 average. Many of these areas are part of the industrial backbone of the European Union.

Table 1: Shares of resident population by type of region

Percentage of population of EU-27 resident in regions with a per capita GDP (in PPS) of	2008	2009
over 150% of EU-27=100	7.4	7.5
over 125% up to 150% of EU-27=100	11.4	11.5
over 90% up to 125% of EU-27=100	41.1	41.7
over 75% up to 90% of EU-27=100	15.8	15.6
under 75% of EU-27=100	24.3	23.7
of which: under 50% of EU-27=100	*8.7*	*7.7*

Source: Eurostat (online data code: nama_r_e2gdp)

Major regional differences persist

Gross domestic product (GDP) in the EU-27 in Purchasing Power Standards (PPS) stood at PPS 23 500 in 2009, down from PPS 25 000 in 2008. Among the 271 NUTS level 2 regions in the EU-27, GDP per capita ranged from PPS 6 400 (27 % of the EU-27 average) in Severozapaden, Bulgaria, to PPS 78 000 (332 % of the EU-27 average) in the capital city region of Inner London in the United Kingdom. Between the two ends of the distribution there was a factor of 12.2 to 1. In 2008, this factor was 11.5. The increase is due to a simultaneous increase of the value for Inner London and a decrease for Severozapaden.

Luxembourg (266 % of the EU-27 average), the Belgian capital city region Brussels (223 %) and the German region of Hamburg (188 %) were second to fourth in the ranking of regions with the highest GDP per inhabitant, followed by the Slovak, French and Czech capital city regions with 178 %, 177 % and 175 % of the EU-27 average respectively[1].

Many of the regions with high GDP per inhabitant were capital city regions or neighbouring regions. A total of 39 regions recorded a per capita GDP of more than 125 % of the EU-27 average. These were situated in southern Germany, around major cities in western Germany, northern Spain and Italy, Austria, the Netherlands, as well as the region around Antwerp in Belgium, the island region of Åland (Finland), Ireland and North Eastern Scotland (United Kingdom). As such, the Slovak and Czech capital city regions of Prague and Bratislava were the only regions in the new Member States where GDP per capita was more than 125 % of the EU-27 average. The next most prosperous region in the new Member States was a long way behind: Bucharest in Romania at 111 % of the EU-27 average. The Slovenian region of Zahodna Slovenija and the Hungarian region of Közép-Magyarország were the only other regions in the new Member States that had an average per capita GDP (in PPS) that was above the EU-27 average.

At the lower end of the distribution, there were 65 regions with GDP per capita that was below 75 % of the EU-27 average. Of these, 18 were concentrated in six of the EU-15 Member States: Italy (four southern regions), France (four overseas regions), Greece (four regions), Portugal (three regions), the United Kingdom (two regions) and Spain (the region of Extremadura). The remaining 48 regions were in Member States that joined the EU-27 in 2004 or 2007. All of these 12 Member States had at least one region below this level, except for Cyprus and Malta. Among these regions, there were 22 where the average GDP per inhabitant was at most half the EU-27 average, and all of these were in Bulgaria, Hungary, Poland, Romania and Slovakia. Around 38.5 million people lived in these 22 regions which correspond to 7.7 % of the EU-27 population.

Regional discrepancies at Member State level, i.e. the spread between the regions with the highest and the lowest per capita GDP of one Member State, increased further compared with 2008 in Bulgaria, Hungary, Slovakia and the UK. For the first time in several years, this was also the case for Finland and Sweden.

[1] *See also point 5 of the methodological notes*

Crisis strikes hard, but does not stop convergence

Earlier publications of this series highlighted the fact that over the last 10 years, an encouraging convergence process in terms of GDP per capita has taken hold across most of the EU-27's regions. Table 1 provides a comparative overview of the share of resident population by level of GDP per capita for 2008 and 2009.

One of the major risks of the 2009 recession at the regional level was that the on-going economic convergence process would come to a halt. However, Table 1 shows that this was not the case. The data show that convergence made further progress, in particular at the lower end of the distribution. The proportion of the population living in regions where per capita GDP is below 50 % of the EU-27 average fell from 8.7 % to 7.7 %. In absolute figures, this corresponds to a decrease from 43.4 million people in 2008 to 38.5 million in 2009, i.e. by almost 5 million inhabitants, or 11.3 %, a considerable change for a period of just one year. At the same time, the average per capita GDP of these regions in relation to the EU-27 average remained at around 39.7 %, although the regions in this group that moved over the 50 % threshold already had values above 48 %.

However, this relative improvement did not translate into an equally strong upward shift over the 75 % threshold. Four regions recorded relative increases that pushed their per capita GDP above 75%, but at the same time, one fell below it. As a result, the entire population living in areas below 75 % of the EU average decreased by just under three million inhabitants or 0.6 % of the EU's total population. It can thus be concluded that regions that had a per capita GDP between 50% and 75 % in 2008 were more affected by the recession than regions below the 50 % threshold. As a result, their share of the EU-27 population increased from 15.6 to 16.0 %.

This conclusion also applies to regions that had a per capita GDP between 75 and 90 % of the EU-27 average in 2008. These regions will attract more attention in future, because they will form a separate group in the context of cohesion policy for the period 2014-2020. Between 2008 and 2009, the share of this group in the total population of the EU-27 decreased by only 0.2 percentage points. In absolute terms, it remained unchanged at about 79 million people. The average GDP per capita of these regions decreased slightly from 83.9% to 83.6 % of the EU-27 average.

The decrease of the population in regions below the 90 % threshold is mirrored by a corresponding increase in more affluent regions, in particular by those that recorded per capita values of more than 150 %. Nine of these 17 regions are capital city regions, which have long been among the most dynamic areas.

The conclusion that the crisis did not stop convergence is also confirmed by data for the aggregate of the Member States that joined the EU between 2004 and 2007. Per capita GDP (in PPS) in these 12 countries taken together rose from 45 % of the EU-27 average in 2000 to 60 % in 2009, i.e. the catch-up process was of the order of 1.7 percentage points per year.

The increase between 2008 and 2009 amounted to 1.4 percentage points. This was substantially less than the 2.9 percentage points recorded a year earlier, but is still of the same order of magnitude as between the years 2000 and 2006.

The findings set out above are confirmed if we confront them with the dispersion of regional GDP. This indicator, which Eurostat has been calculating since 2007, gives a relatively accurate evaluation of economic convergence at national and EU-27 level, because it takes account of the divergences from the national average in all NUTS 2 regions for each country in turn, weighted by the regional population. The same method is applied to the EU-27 aggregate, by treating it as a single country that consists of all 271 NUTS 2 regions.

Table 2 compares the dispersion values for 2008 with those for 2009. First, it appears that at EU-27 level, the recession did not stop the converging trend that has become measurable for several years. The order of magnitude, of around half a percentage point per year, has not changed compared to earlier years.

However, some changes became apparent in the development by Member State. In Spain and Austria, where dispersion showed a moderately declining trend for several years, regional disparities increased perceptibly. The same applies to Finland and Sweden, both of which suffered particularly severe economic contractions in 2009. On the other hand, the decreasing trend in Denmark, Germany, Italy and the Netherlands continued.

Table 2: Dispersion of regional GDP at regional level NUTS 2

Dispersion of regional GDP at regional level NUTS 2 *	2008 %	2009 %	2009-2008 perc. points
EU27	**27.72**	**27.16**	-0.55
Belgium	23.87	24.22	0.35
Bulgaria	37.06	39.59	2.54
Czech Republic	27.29	26.89	-0.39
Denmark	15.75	15.24	-0.51
Germany	16.54	16.08	-0.46
Greece	22.98	23.93	0.94
Spain	17.81	18.47	0.66
France	23.15	23.14	-0.01
Italy	23.01	22.32	-0.68
Hungary	37.51	39.78	2.27
Netherlands	10.87	10.57	-0.31
Austria	14.74	15.14	0.41
Poland	19.75	20.69	0.94
Portugal	23.66	23.56	-0.10
Romania	32.90	30.38	-2.52
Slovakia	29.63	33.16	3.53
Finland	14.19	15.57	1.38
Sweden	15.59	19.02	3.43
United Kingdom	24.62	24.94	0.31

*For the definition of the indicator see details of methodology in the Methodological Notes on page 7

Source: Eurostat (online data code nama_r_e0digdp)

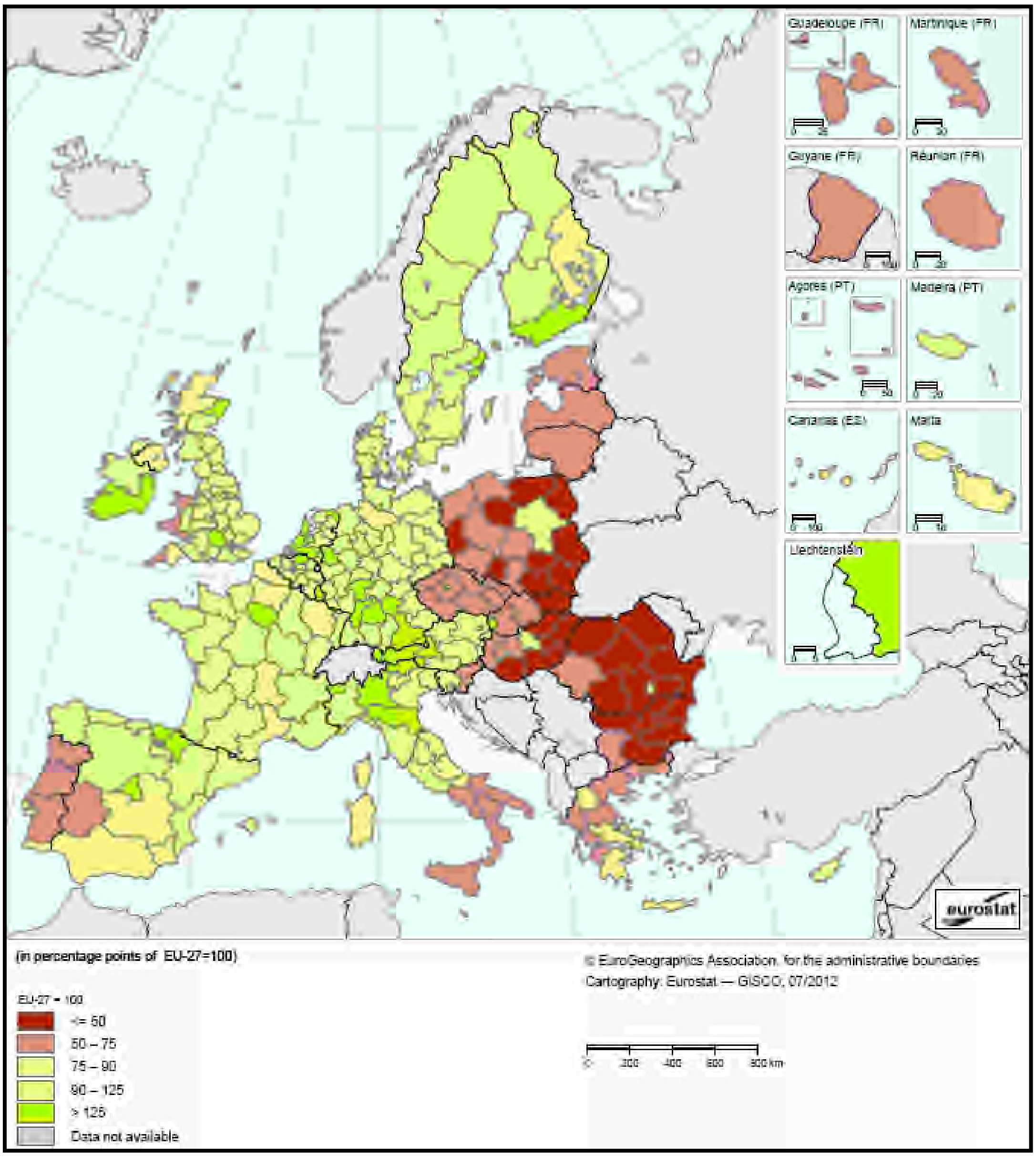
Three-year averages of GDP: 25 % of population remain below 75 % of EU average

This section addresses longer-term trends in economic activity on the basis of three-year-averages of regional GDP. This indicator is of particular significance, since it is likely to be taken as one of the main criteria for allocating EU-27 cohesion support in the 2014-2020 Multiannual Financial Framework.

Map 2 provides an overview of the situation on the basis of the most recent data available, i.e. for the reference years 2007 to 2009. It reveals large areas of below-average economic activity at the periphery of the EU-27.

In the EU-15 Member States, large parts of Greece and Southern Italy did not catch up visibly in relation to the EU-27 average. The more rural and northern Portuguese regions did not make significant progress either, and in the United Kingdom, Western Wales fell back below the 75 % threshold.

Map 2: GDP per capita, in PPS, by NUTS 2 regions, average 2007-2009 (in percentage points of EU-27=100)



Source: Eurostat (online data code: nama_r_e2gdp)

On the other hand, there are no regions below 75 % of the EU-27 average in eastern Germany any longer, and the longer-term trend in Spain continues to be positive as well. This even applies to Extremadura, which remains below 75 %, but caught up with the EU-27 average by more than eight percentage points.

As regards the 12 Member States that joined the EU-27 in 2004 and 2007, the map shows a much more differentiated picture than seven years earlier. Although only a few regions grew strongly enough to breach the 75 % threshold, many others left the cluster of least prosperous regions below 50 % of the EU-27 average. This applies in particular to Poland, the Baltic States and Slovakia.

On the basis of the three-year average 2007-2009, there is now a north-south corridor in the western part of the new Member States, extending across Poland, the Czech Republic, Slovakia, Hungary and Slovenia, in which nearly all regions have GDP per capita values of more than half the EU-27 average.

Table 3 provides a more detailed analysis of trends by level of GDP per capita. It also takes account of the group of regions between 75% and 90 % of the EU-27 average that is likely to benefit from cohesion policy support as from 2014.

The table shows that between 2000-2002 and 2007-2009, there has been considerable convergence at both ends of the distribution.

Regions that recorded GDP levels under 50 % of the average were particularly successful. Within seven years, their share of the EU-27 population dropped from 14.5 to 9.0 %, i.e. by 23.6 million inhabitants. Looking at individual countries, this means that a quarter of the Polish population and half the Slovak population, as well as all three Baltic States, are no longer among the least prosperous areas.

However, for the aggregate of all regions below 75 %, the decrease was much smaller. On balance, its share of the population dropped from 26.9% to 24.8 %, i.e. by 6.8 million people. The most successful regions in this group were Bucharest (Romania), Mazowieckie (Poland) and Andalucía (Spain).

The group of regions between 75% and 90 % of the EU-27 average grew substantially from 10.2% to 13.8 % of total population, i.e. by 19 million inhabitants. This finding appears surprising at first sight, given the low number of areas that moved up over the 75 % threshold. However, closer examination shows that most of this increase was provoked by regions that moved downwards over the 90 % threshold, especially in France and the UK. We thus have to conclude that during the seven-year period between 2002 and 2009, many regions between 90% and 100 % of the EU-27 average encountered substantial economic problems and fell back in comparison with the EU-27 average.

A similar conclusion holds for the largest group of regions that recorded per capita GDP values between 90% and 125 %. These areas account for 42.7 % of the EU-27's population, as compared to 39.6 % seven years earlier. This corresponds to an increase of 21.6 million inhabitants. Much of the increase was caused by affluent regions leaving the top group of areas with GDP values over 125 %. Six regions in Italian economic centres and four in the UK were affected in this way. At the same time, only two regions in Spain and one in Slovakia moved up, over the 125 % threshold.

Because of the shifts explained above, the top group of regions contracted from 23.3% to 18.7 % of the EU-27 population, i.e. by 19.5 million people.

All in all, we can conclude that convergence in the EU-27 between 2000-2002 and 2007-2009 has made substantial progress. This is due mainly to the fact that the Baltic States, Poland, Slovakia, Bulgaria and Romania caught up at a rapid pace. However, many other areas encountered substantial economic difficulties and fell back below the 90 % threshold. In addition, several formerly most-affluent areas dropped out of the top group of regions above 125 % of the EU-27 average.

Table 3: Three-year averages of shares of resident population by type of region

Percentage of population of EU-27 resident in regions with a per capita GDP (in PPS) of	3-year averages:	
	2000-2002	2007-2009
over 125% of EU-27=100	23.3	18.7
over 90% up to 125% of EU-27=100	39.6	42.7
over 75% up to 90% of EU-27=100	10.2	13.8
under 75% of EU-27=100	26.9	24.8
of which: under 50% of EU-27=100	*14.5*	*9.0*

Source: Eurostat (online data code nama_r_e2gdp)

METHODOLOGICAL NOTES

1. Regional data collection: Based on Regulation No 2223/1996 Eurostat has been collecting gross value added data from national statistical institutes as from reference year 1995. The deadline for data transmission is T + 24 months, i.e. the data for 2009 were due for transmission to Eurostat on 31 December 2011. Once per year Eurostat estimates and publishes an official set of regional GDP data for all EU Member States.

2. Data revisions: Data as from 1995 have been revised since the Eurostat news release 28/2011 of 24 February 2011. The same data are used for the Eurostat news release 38/2012 of 13 March 2012 and cover all regions of the EU-27. All data are available online on Eurostat's website (see page 8 for link).

3. Nomenclature of territorial units (NUTS): the Nomenclature of Territorial Units for Statistics (NUTS) has been used since 1988 in EU legislation. The data presented in this publication is based on NUTS 2006 (Regulation No 105/2007 of 1 February 2007, OJ L 39, 10 February 2007 and Regulation No 176/2008, OJ L 61, 5 March 2008). The regions of the Member States are available on Eurostat's website.

EU-27: European Union of 27 Member States from 1 January 2007: Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL), Spain (ES), France (FR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK).

4. Harmonised estimation procedure: At NUTS level 2 there are 271 regions in the EU-27. Data at NUTS levels 2 and 3 for the years 1995 to 2009 are available on Eurostat's website (for link, see page 8). National GDP data are compiled by the national statistical institutes in accordance with the rules of the European System of Economic Accounts (ESA95). These national figures are then distributed across the regions on the basis of the regional structure of GVA. For the first time the extra-regio value added was not distributed to the regions of the country in question. Instead, extra-regio GDP was calculated like the GDP of all other regions; however, the resulting GDP is available only in absolute values, because the extra-regio territory does not have a resident population. GVA is recorded at basic prices. Conversion to Purchasing Power Standards is done on the basis of national Purchasing Power Parities.

5. Interpreting the figures: GDP and, therefore, GDP per capita, are indicators of a country's or region's economic activity and are thus suited to measuring and comparing the degree of economic development of countries or regions. It should be borne in mind that GDP is not equivalent to the income ultimately available to private households in a given country or region. Commuter flows make it more difficult to compare countries, and in particular regions, on the basis of per capita values of GDP. Examples are Inner London, Luxembourg, Brussels, Hamburg, Prague and Bratislava. The net daily commuter inflow of persons in such regions increases the production to a level that the resident economically active population alone could not achieve.

6. Dispersion of regional per capita GDP: This derived indicator records the differences between regional per capita GDP and the national average and makes them comparable between countries. The indicator is available at NUTS 2 and at NUTS 3 levels. The figures used by Eurostat are based on GDP in purchasing power standards (PPS).

For a given country, the dispersion D of the regional GDP of the level 2 regions is defined as the sum of the absolute differences between regional and national GDP per capita, weighted by regional share of population and expressed as a percentage 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:

y_i is the regional GDP per capita of region i
Y is the national average GDP per capita
p_i is the population of region i
P is the population of the country
n is the number of regions in the country.

The value of the dispersion of GDP per capita is zero if the values of regional GDP per capita are identical in all regions of the country or economic area and, all other things being equal, it will show an increase if the differences in per capita GDP between the regions increase. A value of 30% therefore means that the GDP of all regions of a given country, weighted on the basis of the regional population, differs from the national value by an average of 30%.

Further information

Eurostat Website: http://ec.europa.eu/eurostat

Data on 'National accounts including GDP'
http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database
Select 'Regional economic accounts (ESA 95)

Further information about 'National accounts including GDP'
http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/introduction

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