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**COMMISSION STAFF WORKING DOCUMENT**

*Accompanying the*

**FIFTH PROGRESS REPORT ON ECONOMIC AND SOCIAL COHESION  
Growing Regions, growing Europe**

{COM(2008) 371}

**COMMISSION STAFF WORKING DOCUMENT**  
**accompanying the Fifth Progress Report on economic and social Cohesion**  
**Growing Regions, growing Europe**

**1. FIGURES AND TABLES**

Figure 1 – Convergence of GDP per head, employment rates and unemployment rates, 2000-2006

Figure 1 - Dispersion of regional (NUTS2) key indicators (%) (coefficient of variation)

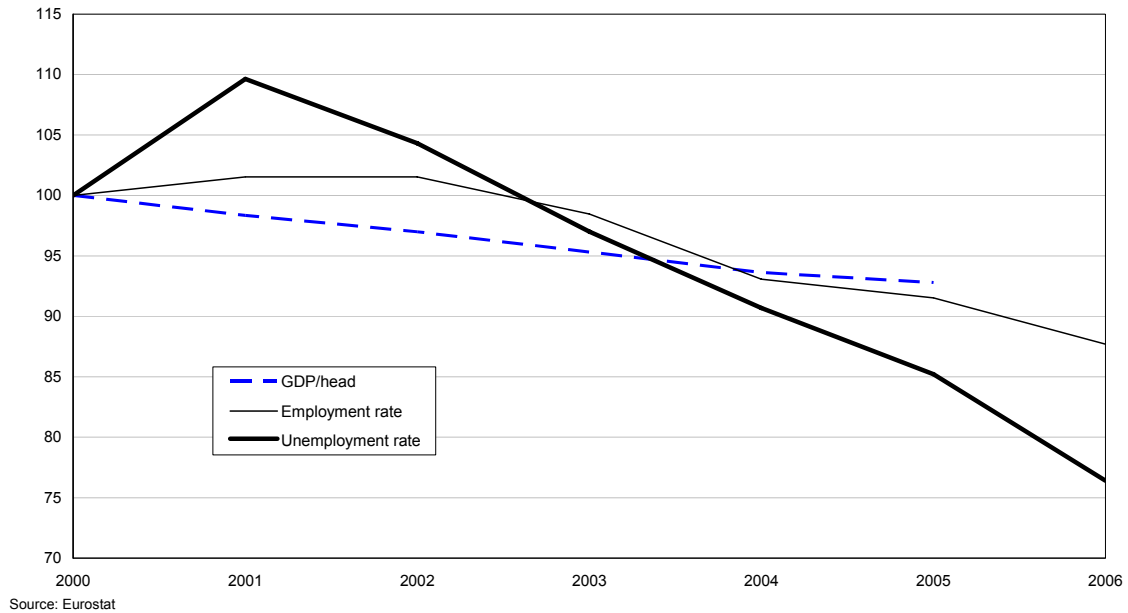


Table 1: Main characteristics for the Convergence, Transition and Regional Competitiveness and Employment regions

	Conv	Transition	RCE	EU27
Population share in 2005 in %	31.4	7.2	61.3	100
Average annual change in population 2000-2005 in % ***	-0.13	0.75	0.58	0.37
Number of regions*	84	28	159	271
Employment rate in 2006 in %**	57.6	62.8	68.1	64.4
Change in employment rate 2000-2006 in percentage points **	1.6	5.2	2.1	2.2
Unemployment rate in 2006 in %***	11.0	8.8	6.8	8.2
Change in unemployment rate 2000-2006 in percentage points ***	-2.9	-2.5	0.2	-1.0
GDP per head in 2005, EU27=100 ****	58	95	122	100
Change in GDP per head 2000-2005 in index points EU27=100 ****	4.3	5.6	-3.7	0
R&D as % of GDP, 2004 or most recent year	0.77	0.94	2.07	1.85

\* DEE0 (Sachsen-Anhalt) taken into account as Convergence region

\*\* based on NUTS breakdown valid 1/1/2007

\*\*\* Excluding two UK, PT, DE and one Finish region (no data)

\*\*\*\* excl. UKM5 and UKM6 (no data)

Source: Eurostat and DG REGIO calculations

Table 2: Employment and GVA share and change in six sectors, 2000-2005

Share in 2005 in %	Employment				GVA			
	Conv	Transition	RCE	EU27	Conv	Transition	RCE	EU27
Agriculture, hunting and fishing	15.5	5.2	2.7	6.4	4.8	3.0	1.4	1.9
Total industry, including energy	21.4	15.1	17.0	18.1	20.7	16.9	20.4	20.2
Construction	7.5	10.4	6.6	7.1	7.7	8.5	5.5	6.0
Trade, transport & communication	23.3	29.2	25.9	25.4	23.1	25.9	21.0	21.4
Financial and business services	8.5	11.1	16.9	14.2	19.6	21.6	29.4	27.7
Other services	23.9	29.0	30.8	28.8	24.1	24.2	22.4	22.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Share of EU27</b>	<b>27.5</b>	<b>6.1</b>	<b>66.4</b>	<b>100.0</b>	<b>12.9</b>	<b>5.7</b>	<b>81.5</b>	<b>100.0</b>

Average Annual Change 2000 - 2005 in %	Employment				GVA			
	Conv	Transition	RCE	EU27	Conv	Transition	RCE	EU27
Agriculture, hunting and fishing	-6.8	-4.8	-2.0	-5.5	0.9	-1.5	-0.4	-0.1
Total industry, including energy	-0.6	-0.9	-2.0	-1.5	3.3	1.7	0.6	0.9
Construction	0.5	2.0	0.8	0.8	0.9	3.0	1.1	1.2
Trade, transport & communication	1.3	1.3	0.6	0.8	2.8	3.3	2.1	2.2
Financial and business services	3.8	4.0	1.9	2.3	2.9	4.1	2.5	2.6
Other services	0.9	1.2	1.3	1.2	1.8	2.8	1.4	1.5
<b>Total</b>	<b>-0.7</b>	<b>0.9</b>	<b>0.5</b>	<b>0.2</b>	<b>2.4</b>	<b>2.9</b>	<b>1.6</b>	<b>1.8</b>

Note: Due to the lack of regional data in the UK, national data was used and all of UK was considered as RCE.

Source: Eurostat and DG REGIO calculations

Table 3: Productivity by sector in 2005 by type of region

2005 GVA per person employed EU27=100	Conv	Transition	RCE	EU27
Agriculture, hunting and fishing	15	54	65	30
Total industry, including energy	46	106	150	112
Construction	49	77	105	84
Trade, transport & communication	47	83	101	85
Financial and business services	111	183	217	192
Other services	48	78	91	79
<b>Total</b>	<b>48</b>	<b>94</b>	<b>125</b>	<b>100</b>

Note: Due to the lack of regional data in the UK, national data was used and all of UK was considered as RCE.

Source: Eurostat and DG REGIO calculations

Table 4: Share of knowledge workers and population with high educational level by type of region, 2006

	Conv	Transition	RCE	EU27
Share of knowledge workers (ISCO 1,2,3) as % of total employment	30.6	34.1	41.3	37.7
Change in share of knowledge workers 2000-2006 in percentage points	3.5	1.9	3.4	3.4
Share of population 25-64 with high educational level (% of total population 25-64)	17.0	24.0	25.6	22.8
Change in share of population 25-64 with high educational level 2000-2006 in percentage points	3.1	4.1	3.0	3.0
Share of Human Resources in Science and Technology (core) (% of active population) 2006	12.4	15.7	17.0	15.5
Change in share of Human Resources in Science and Technology (core) 2000-2006	3.1	2.5	2.2	2.6

The breakdown by category does not include FR9, DE41, DE42, UKM6 and UKM5

Source: Eurostat and DG REGIO calculations

## 2. IDENTIFYING EUROPEAN HIGH GROWTH SECTORS

At the national and European level, total employment and GVA can be broken down into 30<sup>1</sup> NACE categories based on the national accounts data. Regional accounts also provides a breakdown of employment and GVA but only in a six sector breakdown for NUTS2 regions.

Therefore, growth sectors are first identified at the EU27 level based on the 30 sector breakdown. In a second step, these growth sectors are then related to the six sector breakdown at the regional level.

At the European level, several sectors experienced high growth in GVA and/or employment. Figure 2 shows four quadrants according to GVA growth (above and below average) and employment growth (above and below) average. The quadrant where both employment and GVA growth is above the EU average were selected. Two more quadrants were partially considered. In one quadrant, GVA growth was above average but employment growth was below. The sectors where GVA growth was sufficiently high to compensate for lower employment growth or in some cases even employment decline were selected. In the other quadrant employment growth was above average, but GVA growth was below. Again in this quadrant only the sectors where high employment growth compensated for low GVA growth were included as growth sectors. The line on figure 2 shows this distinction.

The second step of the selection involved considering whether all these sectors are drivers of economic growth. Two sectors were considered to be more beneficiaries than drivers of economic growth: Activities of households and Health and social work. Activities of households were excluded because it is a very small sector, especially in terms of GVA. The Health and social work sector was excluded as expenditure in this area contributes to well-being, but is not a main driver of the economy. Nevertheless, due to the ageing of the EU population, the Health and Social work sector will continue to grow and cover an important and growing share of total employment.

<sup>1</sup> One category "Q: Extra-territorial organizations and bodies" was empty both at national and regional levels and has thus been excluded from this analysis. So the breakdown is officially in 17 and 31 categories respectively. To avoid confusion, as the graphs only show 16 and 30 categories, the text refers to 16 and 30 categories.

The Education sector, which was not retained as growth sector due to its low GVA growth, is also likely to continue to grow given the increasing importance of education for the competitiveness of the EU, as mentioned in the Communication.

The education and the health and social work sector, however, both share the characteristic that their performance cannot be determined from GVA or employment shares or growth. The main goal of these sectors is to increase the health and the education level of the EU's population. Therefore, increases in expenditure and employment in these sectors have to be assessed in the light of these goals. As such an analysis was not feasible within the confines of this communication and they were not included in the analytical section.

As a result, nine sectors were identified as EU growth sectors (See Figure 2):

- Two services sectors with high productivity levels: Business activities (K) and Financial services. (J)
- Three services sectors with either high employment or GVA growth and average productivity: Trade (G); Hotels and restaurants (H); and transport and communication (I)
- Construction which experienced strong employment growth combined with a fairly strong, but below average, GVA growth (F)
- Three manufacturing sectors which achieved high GVA growth despite a decline in employment: Chemicals and man-made fibres, Electrical and optical equipment and Transport equipment. These three sectors together constitute the so-called high and medium-high tech manufacturing sector. (DG, DL, DM)

In order to fit the format of regional data, these sectors are aggregated under broader categories. The first group falls under the heading **Financial and business services** (J+K), the second under **Trade, transport and communication** (G+H+I), and **Construction** (F) remains (See Figure 1).

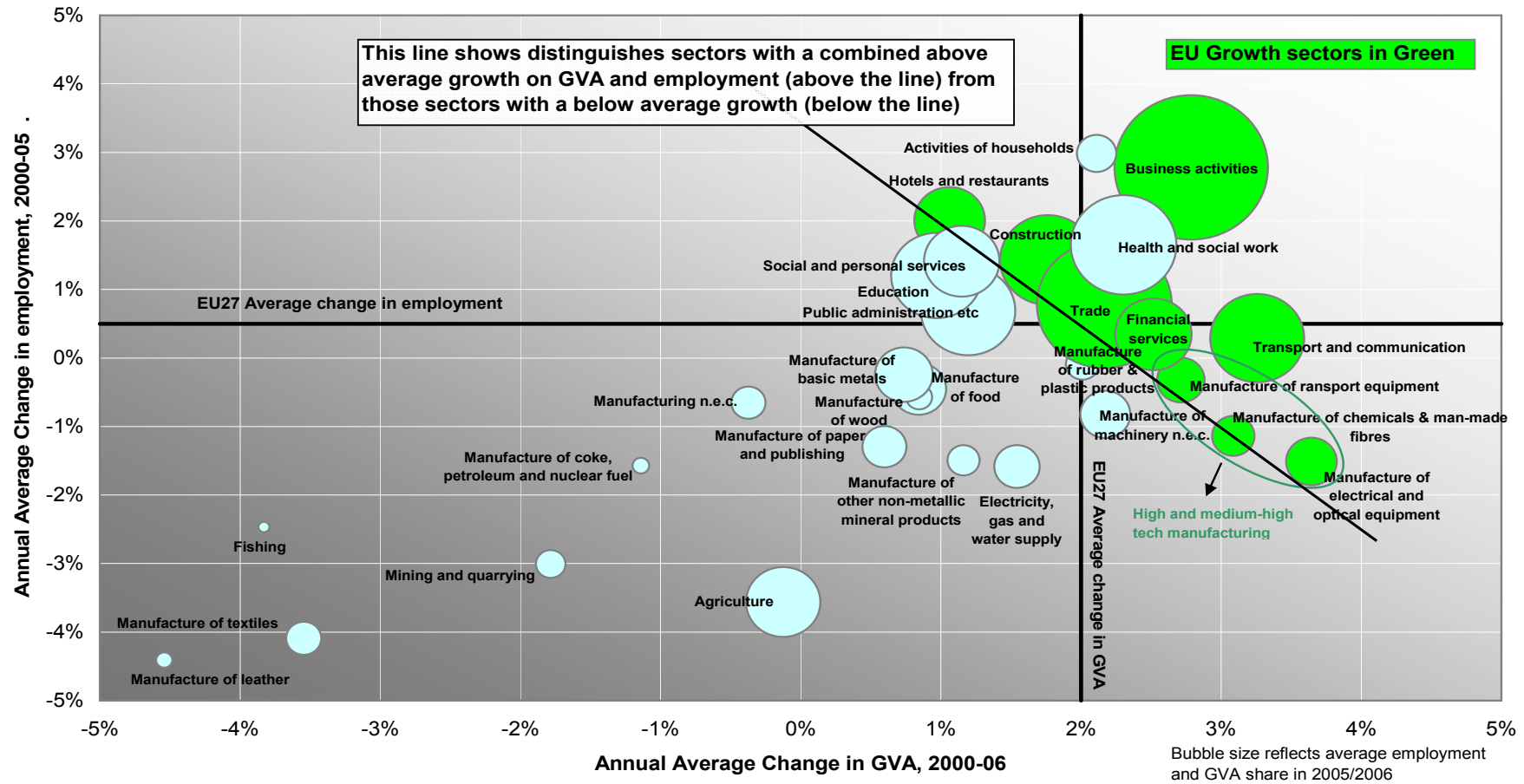
The fourth group is not identifiable at the regional level. Regional data combines the three manufacturing sectors with all other manufacturing sectors, several of which are in decline (see Figure 2), as well as Mining and Electricity, gas and water supply under the heading **Industry** (C+D+E). As a result, this aggregate can not be considered as a pure growth sector (See Figure 1).

**Figure 1: Table linking the NACE 30 sector breakdown at EU level to the 6 sector breakdown at regional level, identifying growth sectors**

Data at National and European Level				Data at the regional level		
NACE Code	Full Name of Sector	Productivity (EU27=100)	Growth Sector?	NACE Code	Full Name of Sector	Growth Sector?
A	Agriculture, hunting and forestry	29		A+B	Agriculture, hunting and fishing	No
B	Fishing	66				
C	Mining and quarrying	216		C+D+E	Industry	In part
D	Manufacturing	101				
DA	Manufacture of food products, beverages and tobacco	90				
DB	Manufacture of textiles and textile products	54				
DC	Manufacture of leather and leather products	58				
DD	Manufacture of wood and wood products	64				
DE	Manufacture of pulp, paper and paper products; publishing and printing	114				
DF	Manufacture of coke, refined petroleum products and nuclear fuel	415				
DG	Manufacture of chemicals, chemical products and man-made fibres	205	Y			
DH	Manufacture of rubber and plastic products	94				
DI	Manufacture of other non-metallic mineral products	100				
DJ	Manufacture of basic metals and fabricated metal products	94				
DK	Manufacture of machinery and equipment n.e.c.	106				
DL	Manufacture of electrical and optical equipment	108	Y			
DM	Manufacture of transport equipment	120	Y			
DN	Manufacturing n.e.c.	63				
E	Electricity, gas and water supply	271				
F	Construction	85	Y	F	Construction	Y
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	77	Y	G+H+I	Trade, transport & communication	Y
H	Hotels and restaurants	66	Y			
I	Transport, storage and communication	122	Y			
J	Financial intermediation	207	Y	J+K	Financial and business services	Y
K	Real estate, renting and business activities	189	Y			
L	Public administration and defence; compulsory social security	95		L thru P	Other services	No
M	Education	74				
N	Health and social work	77				
O	Other community, social and personal service activities	88				
P	Activities of households	29				

Figure 2: Change in GVA and employment by sector in EU27, 2000-2006

Change in GVA and employment by sector in the EU27, 2000-2006





### **3. SOURCES OF DATA AND REFERENCE YEARS**

The data presented in the fifth Progress Report is derived mainly from three sources: National accounts, Regional accounts and the Labour Force Survey.

Due to the different rhythms at which these data sources are updated, the report contains a mix of end years. Below follows an overview of the availability of data by source:

(1) National accounts 30 sector breakdown of GVA and employment

From this source GVA was available up until 2006, while employment was only available up until 2005

(2) Regional accounts

Regional accounts provides data on employment and GVA by sector, population and GDP up until 2005.

- Population and GDP are almost complete with only two new NUTS regions in Northern Scotland missing
- GVA for the 6 sector breakdown is complete with the exception of the UK
- Employment for the 6 sector breakdown is complete with the exception of the UK

(3) Labour Force Survey

This source provides a wide range of data including employment rates, unemployment rates, education levels, knowledge workers and employment by sector. Data is available up until 2006. Due to changes in the NUTS boundaries, time series may not cover the entire period 2000-2006.

- Unemployment rate is complete with the exception of two new NUTS regions in Northern Scotland
- Employment by sector is complete. However to ensure a sufficiently large sample, the average of 2005-2006 was used for employment in Trade, Hotels and Restaurants, High and medium-high manufacturing and Knowledge intensive services.
- Change in employment by sector could not be calculated for the smaller sectors as the changes were almost always within the margin of error. Therefore, national employment data from national accounts was used instead. This is the case for Trade, Hotels and Restaurants and High and medium-high tech manufacturing.
- Share of Knowledge workers is complete.
- High Education level is complete

### **4. DEFINITIONS**

#### **4.1. Human Resources in Science and Technology Core**

The group is defined by the OECD publication: "Manual on the measurement of human resources devoted to S&T "Canberra Manual" 1995

This indicator covers people who have successfully completed education at the third level in an S&T field of study and are employed in an S&T occupation. It is measured as a share of the economically active population.

#### **4.2. Knowledge Workers**

This defines employment by the type of occupation in all sectors. It covers the first three classes of the International Standard Classification of Occupations (ISCO) as defined by the International Labour Organisation classification: (1) legislators, senior officials and managers, (2) professionals and (3) technicians and associate professionals.

#### **4.3. High and medium-high tech manufacturing**

Eurostat defines this group as the following NACE 2 digit codes:

24 Manufacture of chemicals and chemical product,

29 Manufacture of machinery and equipment n.e.c.;

30 Manufacture of office machinery and computers;

31 Manufacture of electrical machinery and apparatus n.e.c.;

32 Manufacture of radio, television and communication equipment and apparatus;

33 Manufacture of medical, precision and optical instruments, watches and clocks;

34 Manufacture of motor vehicles, trailers and semi-trailers;

35 Manufacture of other transport equipment, excluding 35.1 Building and repairing of ships and boats

This group can be aggregated to the NACE codes DG, DL and DM with the only issue that it does not excluding 35.1 Building and repairing of ships and boats. This aggregation means that this sector can be identified in the 30 sector breakdown. This is also the definition that was used to measure employment.

#### **4.4. Knowledge intensive services**

Eurostat defines knowledge intensive services as following:

61 Water transport;

62 Air transport;

64 Post and telecommunications;

J: 65 to 67 Financial intermediation;

K: 70 to 74 Real estate, renting and business activities;

M: 80 Education;

N: 85 Health and social work;

92 Recreational, cultural and sporting activities

Due to the detailed breakdown of the NACE codes, only employment data based on the LFS is available.

GVA can only be provided for a proxy which included 63 (Supporting and auxiliary transport activities; activities of travel agencies) and excludes 92 (Recreational, cultural and sporting activities), which was not used in this report.

## Share of GVA in financial and business services

Gross Value Added in financial intermediation and real estate, renting and business activities as a share of the regional Gross Value Added

### Why does this matter?

**Gross Value Added (GVA)** is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production. In other words, it is the value *added* in the production of goods and services. The share of financial and business services in total GVA measures the contribution of this sector to the region's total GVA. The financial and business services sector includes activities such as financial intermediation, insurance, pension funding, real estate, business consultancy and research and development.

The financial and business services sector is a key sector of the European economy. It accounts for 28% of total GVA and 15% of employment. It is also its most dynamic sector. Between 2000 and 2006, the average annual growth rate of GVA in the sector was 2.6% while employment grew at average annual rate of 2.5%.

### How do the EU regions score?

The share of GVA in financial and business services is the highest in regions located in Belgium, France, Germany, Italy, the Netherlands and the United Kingdom. As reflected by the top ten regions, such activities are almost systematically hosted

Country	Top ten regions in 2005	Share of financial and business services in total GVA, %
LU	Luxembourg (Grand-Duché)	45.7
FR	Île de France	42.1
DE	Darmstadt	40.8
BE	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest	38.3
NL	Utrecht	37.8
DE	Hamburg	37.2
DE	Oberbayern	37.1
SE	Stockholm	36.7
NL	Noord-Holland	35.4
BE	Prov. Vlaams-Brabant	34.5

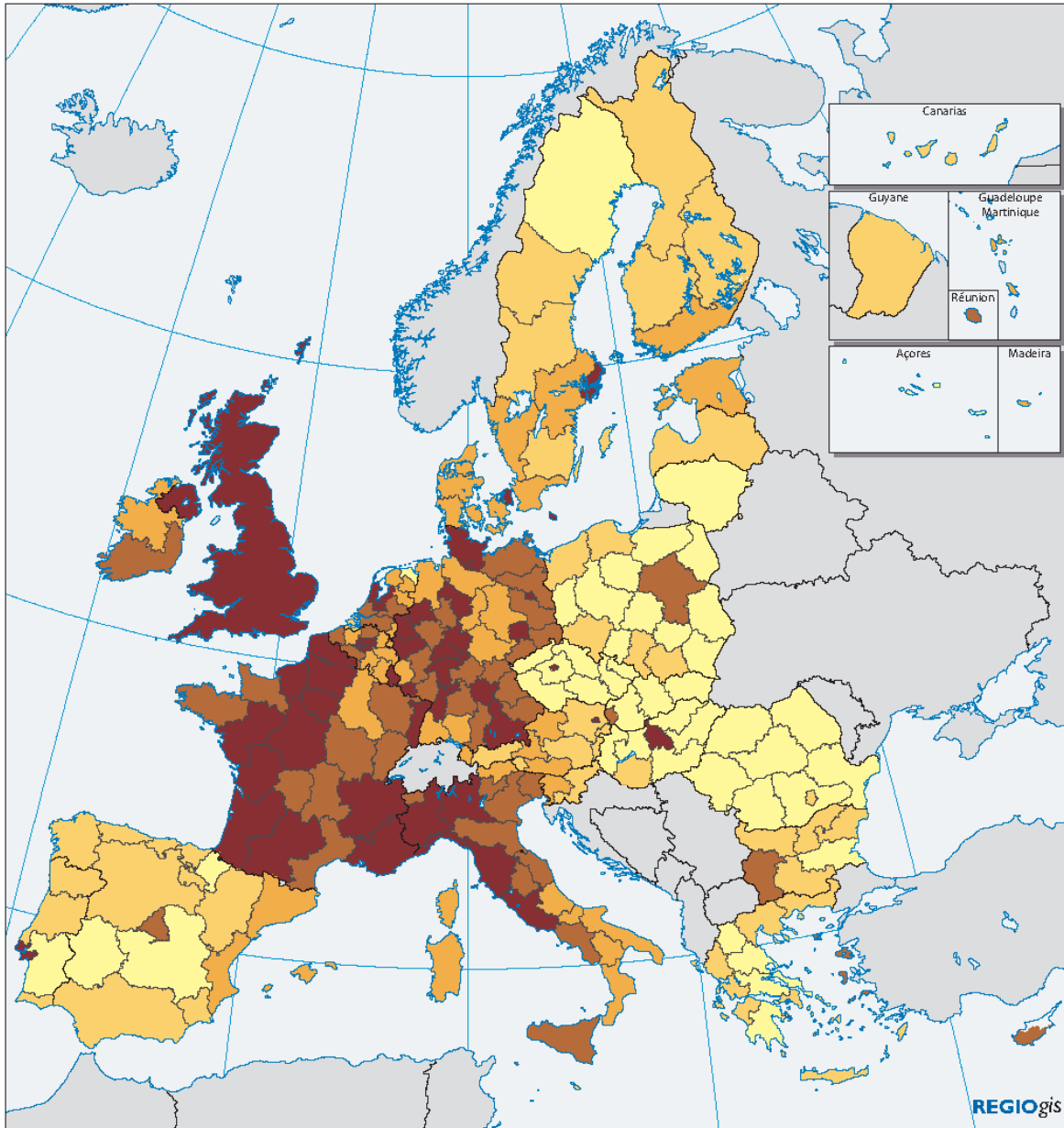
Country	Top ten regions movers	Average annual change in financial intermediation and business services GVA, %
This table shows the ten regions in which financial and business services GVA grew fastest between 2000 and 2005		
RO	Sud - Muntenia	13.5
RO	Nord-Est	13.2
RO	Vest	11.2
RO	Sud-Est	10.9
IE	Border, Midland and Western	10.9
RO	Sud-Vest Oltenia	10.1
EE	Eesti	10.0
BG	Yugozapaden	9.9
RO	Centru	9.8
IE	Southern and Eastern	9.0

by urban and often capital city regions. The weight of the sector is much less in most regions of the new Member States but also in the old cohesion and Nordic countries. Regional disparities in terms of the share of GVA

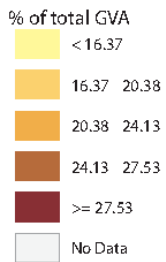
in financial intermediation and business services are important as illustrated by the distance between the highest share (Luxembourg (Grand-Duché) with 45.7%) and lowest share (Moravskoslezsko with 10%).

Growth in financial and business services has generally been high in regions where its share of GVA is low. Five out of the top ten movers recorded are located in Romania. Nevertheless, its share in those regions' GVA is less than 15%. This partly reflects the rapid catching-up process at work in this sector.

A high share of GVA in financial and business services implies a relative specialisation of the economy in a high value added sector which employs a highly



**Share of GVA in financial intermediation and business services, 2005**



EU 27 = 27.7  
 NACE J and K  
 UK: national level  
 Source: Eurostat



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## Share of employment in knowledge intensive services

Employment in knowledge intensive services as a share of regional total employment

### Why does this matter?

Knowledge intensive services (KIS) cover the following sectors: Water and air transport (I.61 and I.62); post and telecommunications (I.64); financial intermediation (J); business activities (K); education (M); health and social work (N); and recreational, cultural and sporting activities (O.92).

KIS include key sectors of activity for the European economy. Most of them have grown at a faster pace than other sectors, both in terms of GVA and employment. Almost a third of the EU labour force is employed in KIS. These sectors generally feature high productivity of labour and are particularly intensive in high skilled labour.

### How do the EU regions score?

Most regions with a high share of employment in KIS are either capital city regions or regions hosting an important urban area. For those regions, KIS sometimes account for more than 50% of employment with Inner London topping at 57%. Share of employment in KIS is

Country	Top ten regions in 2006	Share of employment in KIS, %
UK	Inner London	57.0
UK	Outer London	50.8
FI	Åland	50.7
NL	Utrecht	49.3
UK	Surrey, East and West Sussex	49.2
DE	Berlin	48.4
BE	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest	47.6
NL	Noord-Holland	47.1
FR	Île de France	47.0
UK	Berkshire, Buckinghamshire and Oxfordshire	46.8

much lower in Cohesion countries, particularly in Romania and Bulgaria where for some regions it is slightly above 10%.

Around 90% of regions have experienced an increase in the share of employment in KIS which reflects the tendency of the European economy to specialise in these types of activities<sup>1</sup>.

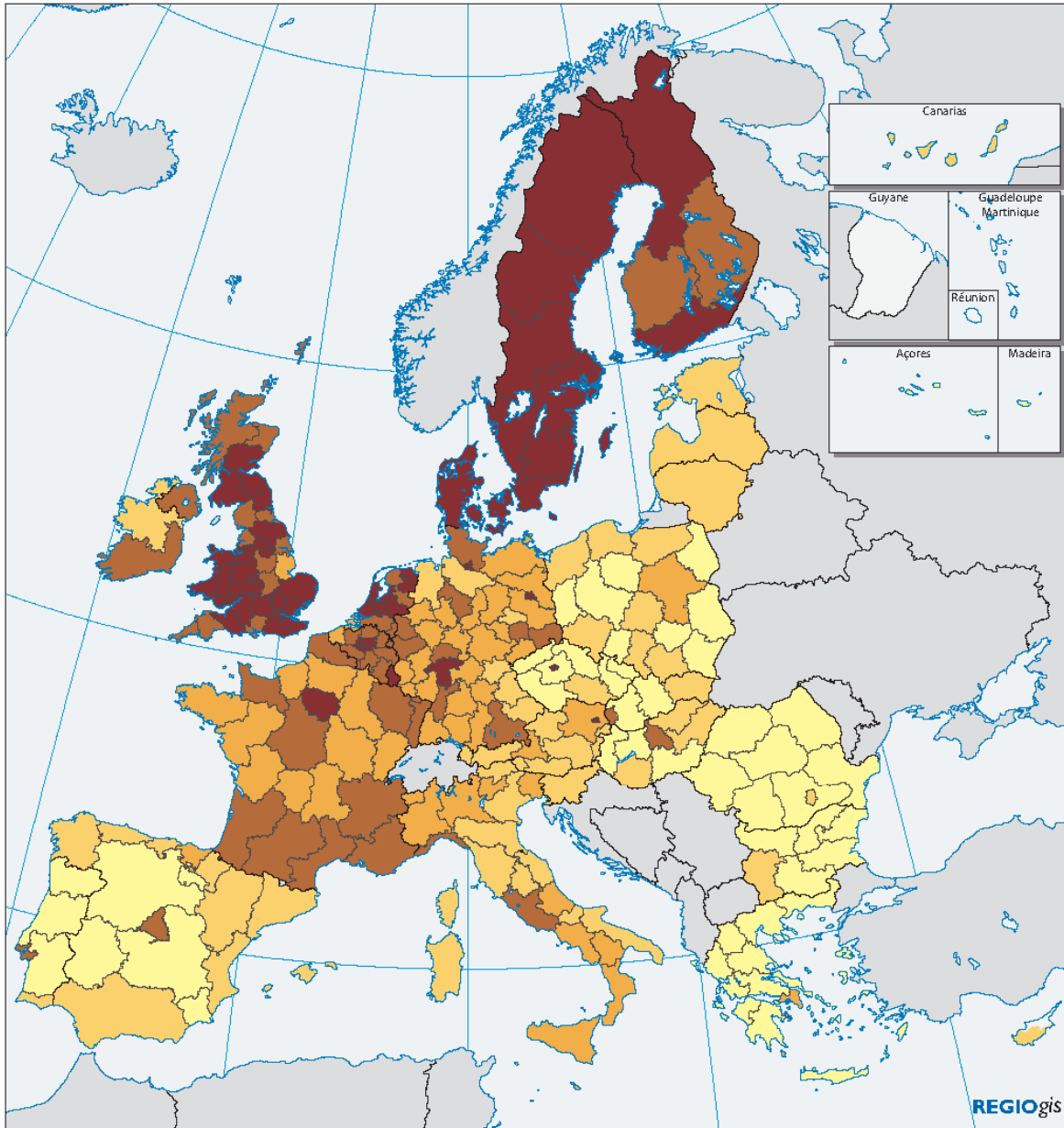
High growth in the share of KIS employment is mostly observed within the EU-15<sup>2</sup> where regions with high growth in share of employment in KIS are not systematically located near a capital city region, which reflects a movement towards the dispersion of these sectors away from capital cities. On the contrary, in the new Member States, regions with high growth in the share of employment in KIS are

Country	Top ten regions movers	Change in the share of employment in KIS, percentage points
This table shows the ten regions where employment in KIS increased fastest between 2000 and 2006		
ES	Ciudad Autónoma de Melilla	12.2
ES	Ciudad Autónoma de Ceuta	9.4
ES	Principado de Asturias	8.1
RO	Bucureşti - Ilfov	7.6
LU	Luxembourg (Grand-Duché)	7.1
FR	Centre	7.1
IT	Abruzzo	7.0
PT	Região Autónoma da Madeira	6.3
IT	Basilicata	6.3
PT	Algarve	6.1

generally either capital city regions or neighbouring the capital city region. In these countries, KIS therefore tend to concentrate in or around capital cities, which is well illustrated by the case of Bucureşti-Ilfov.

<sup>1</sup> Due to lack of data, changes in the share of employment in KIS could not be calculated for Bulgaria and Poland.

<sup>2</sup> Ciudad Autónoma de Melilla and Ciudad Autónoma de Ceuta have recorded the highest growth but one must account for the small size of the regions and their peculiarities.



**Share of employment in knowledge-intensive services, 2005-2006**

% of total employment

- < 23.67
- 23.67 28.82
- 28.82 33.47
- 33.47 39.14
- >= 39.14
- No Data

EU 27 = 32.6  
Source: Eurostat

0 500 Km

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## Share of employment in trade

Employment in wholesale, retail trade and repair of vehicles and goods as a share of regional total employment

### Why does this matter?

Trade has a considerable weight in the European economy. It accounts for 11.3% of the EU-27 total GVA and 14.4% of EU-27 employment. Growth in the sector is slightly superior to the EU-27 average, both in terms of GVA and employment with average growth rates of 2.2% and 0.8% between 2000 and 2005. The sector remains a key reservoir of low qualified jobs. As for hotels and restaurants, GVA per person employed is relatively low but it is not as exposed to international competition as most of these services are local and not tradable over long distances.

### How do the EU regions score?

For some regions, trade accounts for a substantial proportion of employment, with regions like Algarve, Ciudad Autónoma de Melilla or Ciudad Autónoma de Melilla where its share in regional employment is more than 20%. However, most regions in Europe have a significant share of employment in trade. This is illustrated by the difference between the highest and the lowest regional shares (Algarve with 20.7% and Sud-Vest Oltenia with 7.9%) which is much smaller than for other sectors. This relatively even distribution of employment in the sector is partly explained by the nature of its activities. They include a number of proximity services that can only be produced locally which limits the scope for geographical concentration of the sector.

Country	Top ten regions in 2006	Share of employment in trade, %
PT	Algarve	20.7
ES	Ciudad Autónoma de Melilla	20.4
GR	Ciudad Autónoma de Melilla	20.1
GR	Kentriki Makedonia	19.6
GR	Attiki	19.5
RO	Bucureşti - Ilfov	19.2
UK	Lincolnshire	19.0
GR	Ionia Nisia	18.8
ES	Canarias	18.5
DE	Mittelfranken	17.8

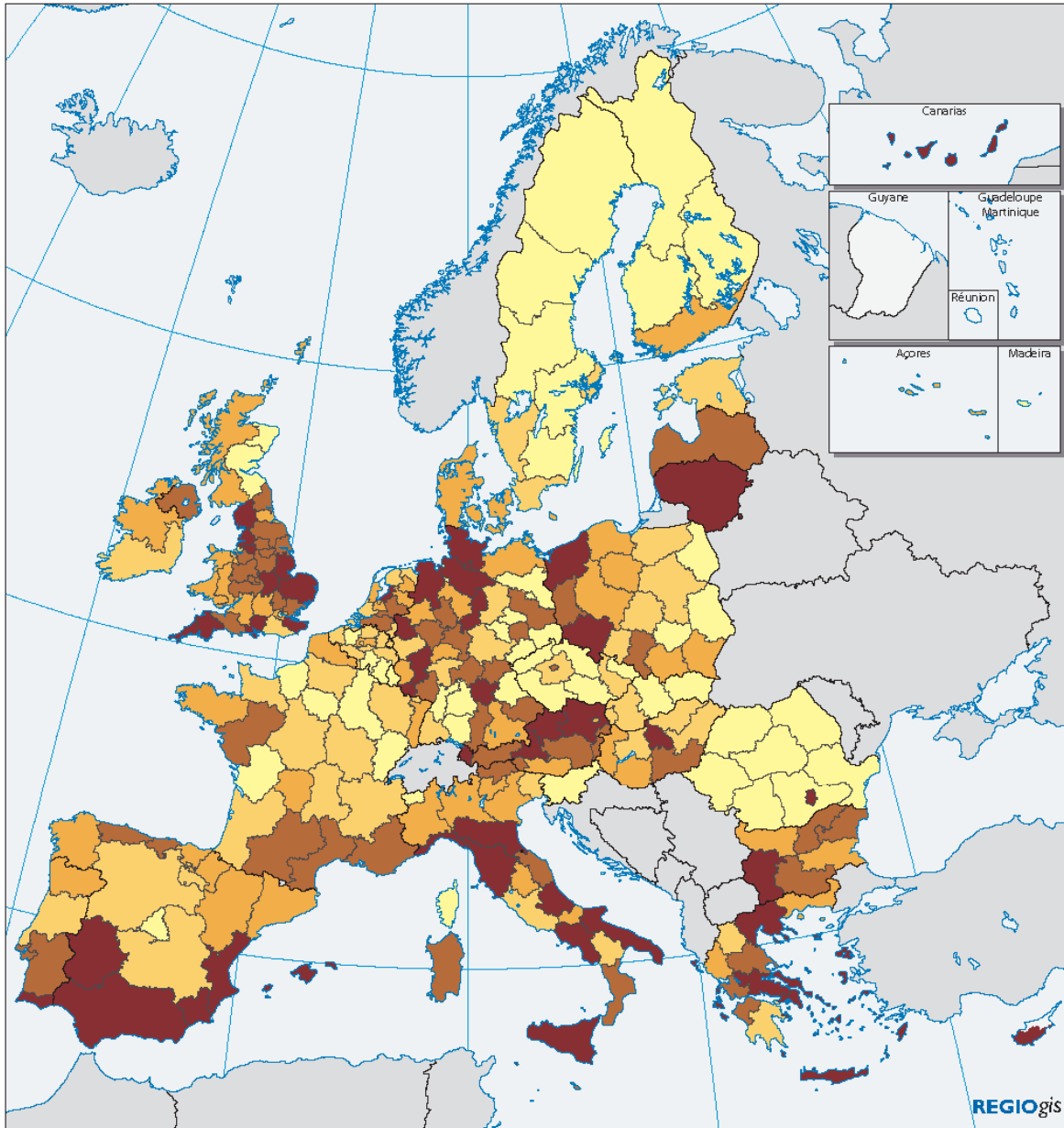
Due to lack of data at the regional level, growth of the sector is examined at the national level<sup>1</sup>. For a large majority of countries, growth of GVA has been higher than growth of employment, which reflects the general trend towards productivity gains within the sector.

Country	Top five countries movers	Annual average change in employment in trade, %
This table shows the five countries in which employment in retail and wholesale grew fastest between 2000 and 2005		
SK	Slovensko	7.3
RO	România	5.0
BG	България / Bulgaria	4.9
LV	Latvija	3.4
IE	Éire / Ireland	2.9

sector as disposable incomes rise.

Employment in trade has generally increased, except in the Czech Republic, Denmark, the Netherland, Germany and Poland. It is mainly in the new Member States that growth of GVA and employment has been the highest, although countries like Ireland and Spain have also recorded high growth of employment in the sector. Overall high economic growth will benefit the trade

<sup>1</sup> GVA data is not available for Cyprus, Greece, Ireland and Malta. Employment data is not available for Cyprus and Malta. Employment data for Romania is not available after 2002. Employment data for Austria and Greece are based on jobs rather than persons.



**Share of employment in trade, 2005-2006**

- % of total employment
- < 12.77
  - 12.77 - 13.96
  - 13.96 - 14.83
  - 14.83 - 15.96
  - $\geq$  15.96
  - No Data

EU-27 = 14.4  
 NACE G  
 Source: Eurostat

0 500 Km

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## Share of employment in hotels and restaurants

Employment in hotels and restaurants as a share of regional total employment

### Why does this matter?

The sector hotels and restaurants accounts for only 4% of EU-27 total employment. However, it is a major sector for some regions where it provides a substantial number of mostly low-qualified jobs. It is the second sector of the Union in terms of employment growth with an average growth rate of 2% per annum between 2000 and 2005. Labour productivity is rather low but, except for the sea and sun vacations, the sector is relatively sheltered from international competition.

### How do the EU regions score?

The share of employment in hotels and restaurants is obviously higher in regions featuring a particular tourist and/or recreational interest, which is the case for all top ten regions. In general, the share of employment in hotels and restaurants is higher in the regions of Southern Europe but also in some Northern regions like Cornwall and Isles of Scilly or Border, Midland and Western which have substantially developed their tourism industry and where the sector accounts respectively for 7.9% and 5.9% of total employment.

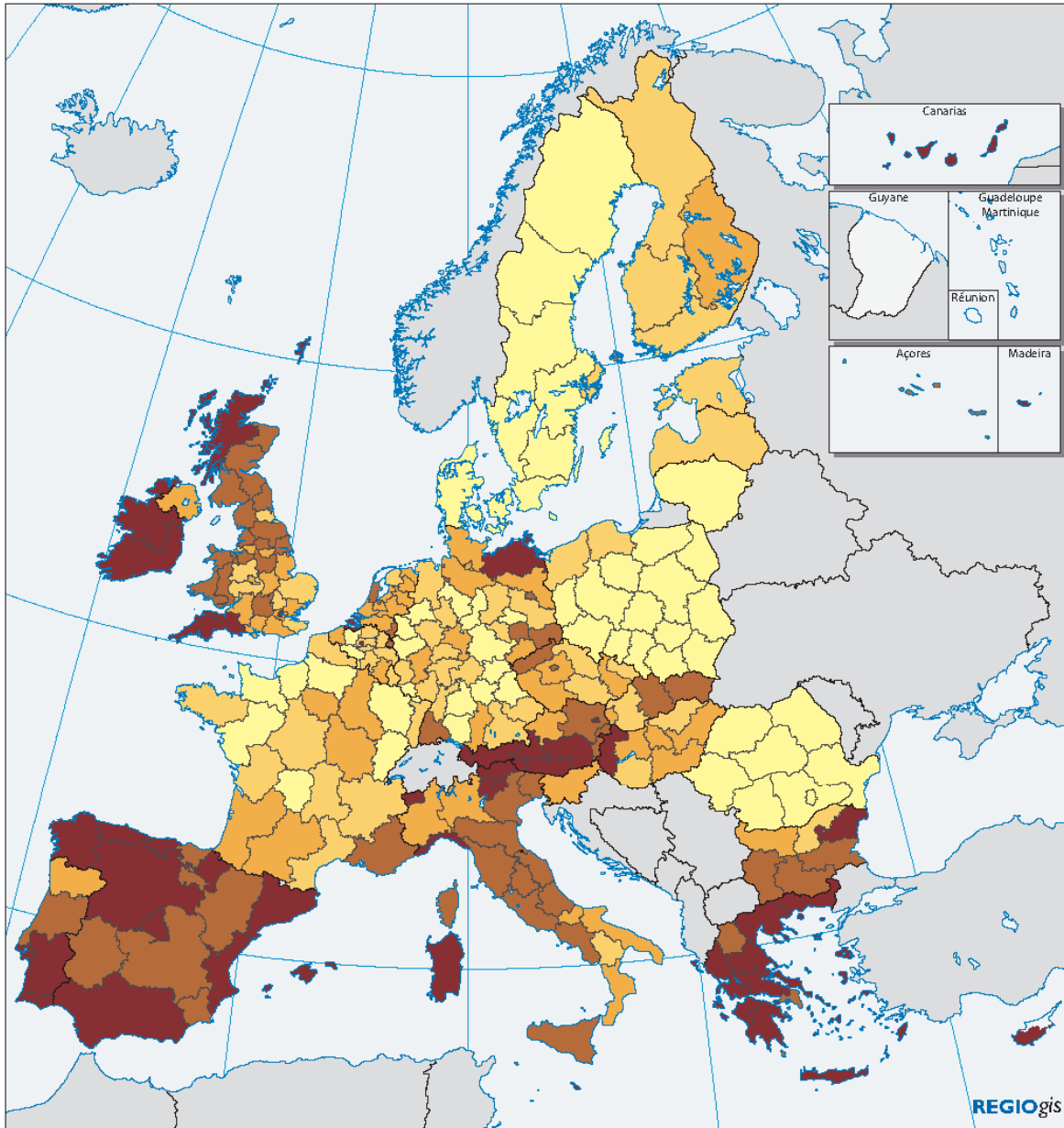
Country	Top ten regions in 2006	Share of employment in hotels and restaurants, %
GR	Notio Aigaio	19.8
GR	Ionia Nisia	17.7
ES	Illes Balears	17.5
ES	Canarias	14.4
PT	Algarve	13.8
GR	Kriti	12.0
AT	Tirol	11.5
IT	Provincia Autonoma Bolzano/Bozen	11.0
PT	Região Autónoma da Madeira	10.6
AT	Salzburg	9.7

Due to lack of data at the regional level, growth of the sector is examined at the national level. Between 2000 and 2005, employment in hotels and restaurants has grown in every EU Member State<sup>1</sup>. Employment growth is generally high in countries with an important tourism industry like Bulgaria, Spain, Italy and Portugal.

Country	Top five countries movers	Average annual change in employment in hotels and restaurants, %
This table shows the five countries in which employment in hotels and restaurants grew fastest between 2000 and 2005		
BG	Balgarija	5.1
ES	España	4.7
LV	Latvija	3.4
IT	Italia	3.3
PT	Portugal	3.0

However, in some countries, particularly in the new Member States, growth of GVA was very high and above growth of employment, which implies that growth in the sector was accompanied by an increase in labour productivity. This is for instance the case of Latvija where between 2000 and 2005 the annual average growth rate of GVA is 13.7% and that of employment is 3.4%. On the contrary, for other countries mainly located in the EU15, growth of GVA has been lower than growth in employment, like for instance in Portugal where GVA in hotels and restaurants decreased by 2.4% while employment increased by 3.0%.

<sup>1</sup> GVA data is not available for Cyprus, Greece, Ireland and Malta. Employment data is not available for Cyprus and Malta. Employment data for Austria and Greece are based on jobs rather than persons.



**Share of employment in hotels and restaurants, 2005-2006**

% of total employment

- < 2.8
- 2.8 3.69
- 3.69 4.26
- 4.26 5.64
- >= 5.64
- No Data

EU 27 = 4.1  
 NACE H  
 Source: Eurostat

0 500 Km

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## Share of GVA in industry

Gross Value Added in industry as a share of the regional Gross Value Added

### Why does this matter?

**Gross Value Added (GVA)** is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production. In other words, it is the value *added* in the production of goods and services. The share of industry in total GVA measures the contribution of this sector to the region's total GVA. The industry sector includes mining and quarrying, manufacturing and electricity, gas and water supply.

Industry is a major economic sector in Europe as it accounts for 20% of total GVA and 18% of employment. However, since 2000 overall GVA growth in this sector has been slow and employment growth was negative.

### How do the EU regions score?

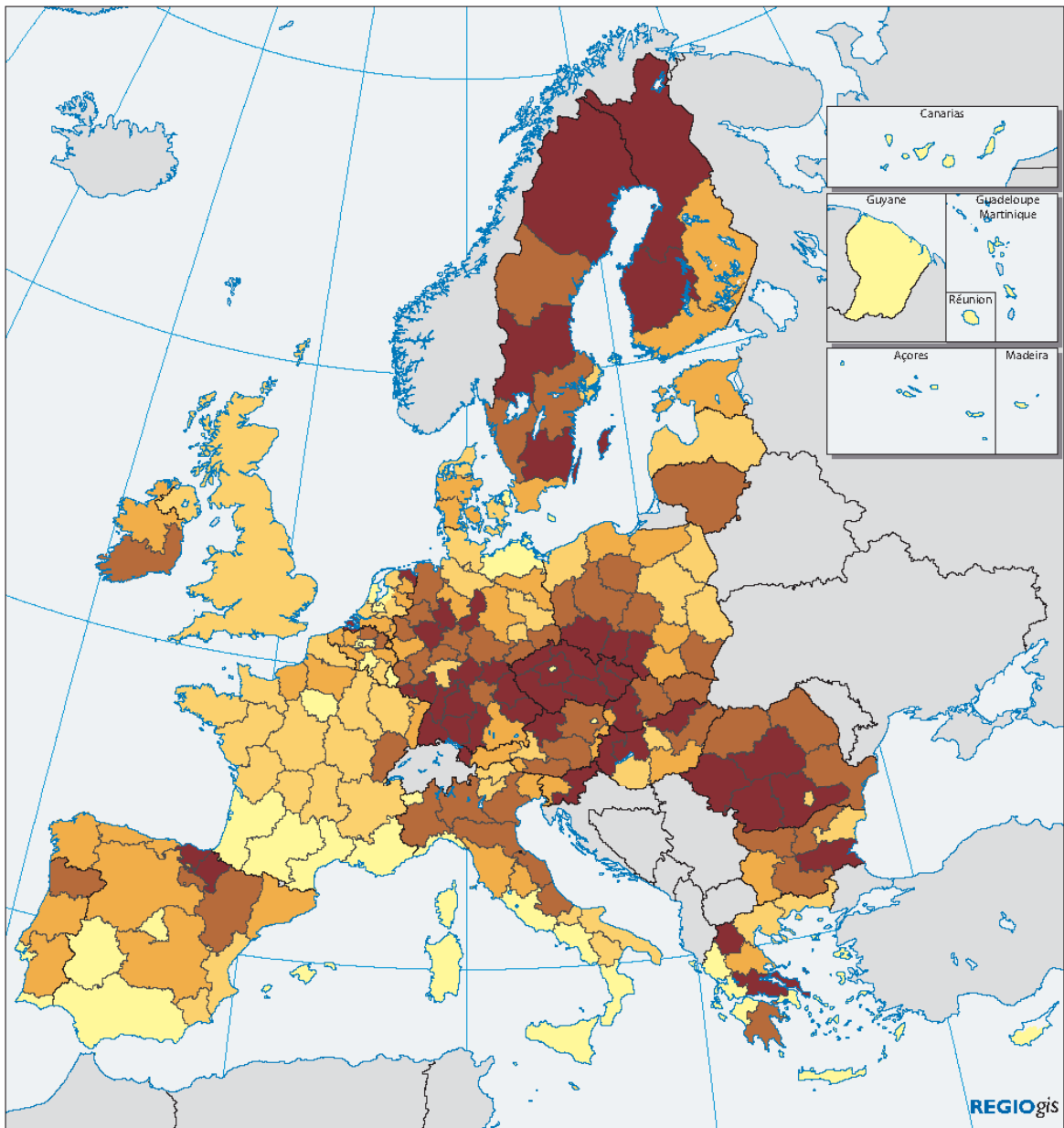
Industry has a far larger share of economic activities in the new Member States than in the rest of the EU. Seven out of the top ten regions are located in the EU-12. Nevertheless, some regions in the old Member States also have an important share of their economic activities in that sector, particularly in Southern Germany, Northern Italy and the Nordic countries. Identical shares of industry may however hide very different situations as the sector covers a very wide range of activities some with very high levels of productivity such as manufacturing chemicals and others with very low levels such leather.

Country	Top ten regions in 2005	Share of industry on total GVA, %
NL	Groningen	44.7
CZ	Moravskoslezsko	44.3
HU	Közép-Dunántúl	42.4
GR	Sterea Ellada	41.1
CZ	Severozápad	39.8
SK	Západné Slovensko	39.1
CZ	Severovýchod	38.2
CZ	Střední Čechy	38.1
DE	Braunschweig	37.6
HU	Nyugat-Dunántúl	37.5

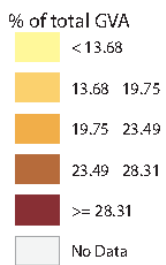
In general, regions with a strong growth in the industry sector were the regions that had a relatively high share of industry within total GVA. Many of these regions had a share above 28% as compared to the EU average of 18%. This implies that the specialisation of Europe's industrial regions is growing. The geographical dimension of this trend is also coherent with the fact that new Member States economies have a strong competitive advantage in industry based on a relatively highly qualified labour force but which is less expensive compared to the rest of the EU. Employment in the industry sector in the Cohesion countries remained roughly stable while it fell in the other EU Member States.

Country	Top ten regions movers	Annual average change in industry GVA, %
This table shows the ten regions in which industry GVA grew fastest between 2000 and 2005		
SK	Bratislavský kraj	11.4
SK	Západné Slovensko	10.9
SK	Východné Slovensko	10.5
LT	Lietuva	10.3
SE	Övre Norrland	10.2
EE	Eesti	9.5
CZ	Moravskoslezsko	8.8
PL	Lubuskie	7.9
BG	Yugozapaden	7.5
GR	Thessalia	7.4

A high share in the industry sector can be an important source of employment and economic wealth. However, due to growing international competition in this sector, the regions and/or firms with a low productivity should aim to move up the value chain and diversify their economy to become less vulnerable to globalisation.



**Share of GVA in industry, 2005**



EU 27 = 20.2  
 NACE C, D and E  
 UK: national level  
 Source: Eurostat



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## Share of employment in high and medium-high tech manufacturing

Employment in high and medium-high tech manufacturing as a share of regional total employment

### Why does this matter?

High and medium-high tech manufacturing includes the following manufacturing sectors: chemical, chemical products and man-made fibres (DG); electrical and optical equipment (DL); and transport equipment (DM). It designs and produces among others audio and video equipment, computers, aircrafts, motor vehicles, precision and optical instruments and pharmaceuticals.

This sector uses sophisticated production techniques, invests heavily in R&D and innovation and uses highly skilled labour. Within manufacturing, it is the least vulnerable to globalisation and may benefit from increased trade. High and medium-high tech manufacturing has grown at an average rate of 2.4% per year between 2000 and 2005. It employs 6.6% of the EU labour force but employment in the sector has declined at an average rate of 1% per year.

Country	Top ten regions in 2006	Share of employment in high and medium high tech manufacturing, %
DE	Stuttgart	20.6
DE	Karlsruhe	17.5
DE	Braunschweig	16.1
DE	Tübingen	16.0
DE	Niederbayern	15.6
DE	Oberpfalz	15.5
DE	Unterfranken	14.4
DE	Rheinhessen-Pfalz	13.8
DE	Freiburg	13.6
HU	Közép-Dunántúl	13.6

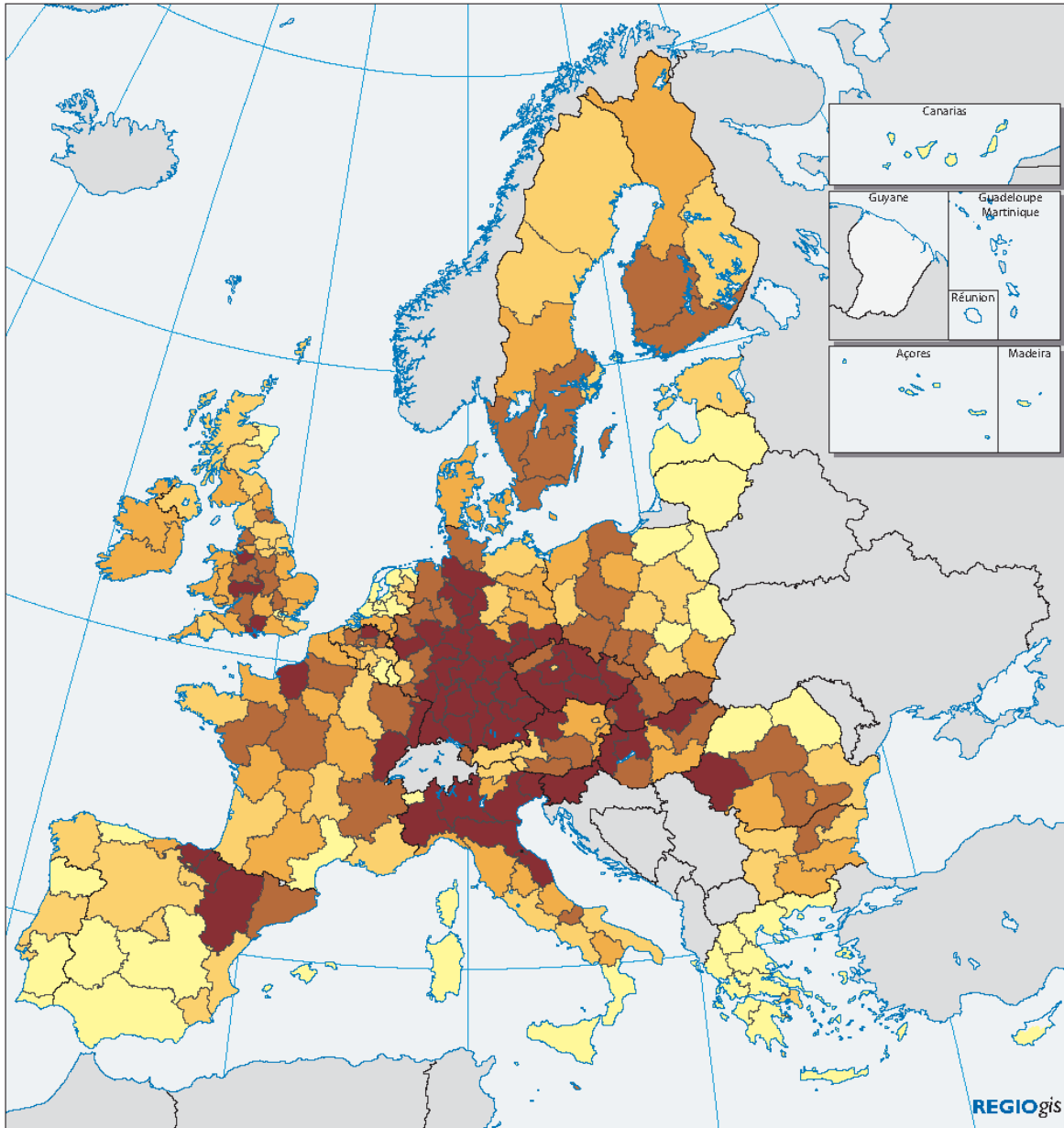
### How do the EU regions score?

The geographical distribution of high and medium-high tech manufacturing is characterised by the concentration of regions where it accounts for a large shares of employment in the central part of Europe, notably in Germany, Northern Italy and the Czech Republic. Some regions in France, Hungary, Northern Spain, Romania, Slovakia and the United Kingdom also have regions with high shares of employment in this sector but they are more geographically dispersed.

Country	Top five countries movers	Annual average change in employment in high and medium high tech manufacturing, %
This table shows the five countries in which employment in high and medium high tech manufacturing grew fastest between 2000 and 2005		
SK	Slovenská Republika	3.3
CZ	Česká Republika	2.6
EE	Eesti	1.9
LT	Lietuva	1.3
HU	Magyarország	1.2

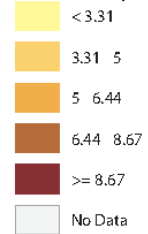
Slovakia recorded average annual growth rates exceeding 15%. Growth in employment has been much more limited and even negative in a number of countries like the United Kingdom where employment in high and medium high tech manufacturing fell at an average rate of 5.2% per year. One explanation for this pattern is that these sectors have outsourced the most labour intensive aspects of production and focussed on activities related to R&D which require high skilled labour and create the largest share of the value added.

<sup>1</sup> GVA data is not available for Cyprus, Estonia, Greece, Ireland, Latvia, Malta and Poland. Employment data is not available for Cyprus, Latvia, Malta and Romania.



**Share of employment in high and medium high-tech manufacturing, 2005-2006**

% of total employment



EU 27 = 6.6  
Source: Eurostat



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## GDP/head

Gross Domestic Product per head in Purchasing Power Standards

### Why does this matter?

**Gross domestic product (GDP)** is the total value of all goods and services produced within a region in a given time span. It corresponds to the economic wealth generated by a region and is the most common indicator of economic activity. GDP/head is meant to capture the level of output and income per person within a region. In order to compare regions, it is computed in Purchasing Power Standards (PPS) which eliminates differences in purchasing power due to different price levels between regions.

In general, the level of GDP per head is closely related to global economic performance, in particular to production factor productivity and employment. Its growth rate indicates the pace of economic development.

### How do the EU regions score?

The geographical distribution of GDP/head underlines large development gaps between European regions and particularly between old and new Member States. The top ten regions are all located in the EU-15 and are often capital city regions. At the other end of the spectrum, several regions in Bulgaria and Romania have levels of GDP/head below 30% of the EU-27 average. The lowest level is 24% in Nord-Est, Romania.

Country	Top ten regions in 2005	GDP/head (PPS), EU-27=100
UK	Inner London*	303
LU	Luxembourg (Grand-Duché)*	264
BE	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest*	241
DE	Hamburg*	202
AT	Wien*	178
FR	Île de France*	173
SE	Stockholm*	172
UK	Berkshire, Buckinghamshire and Oxfordshire	168
DE	Oberbayern	166
NL	Groningen	164

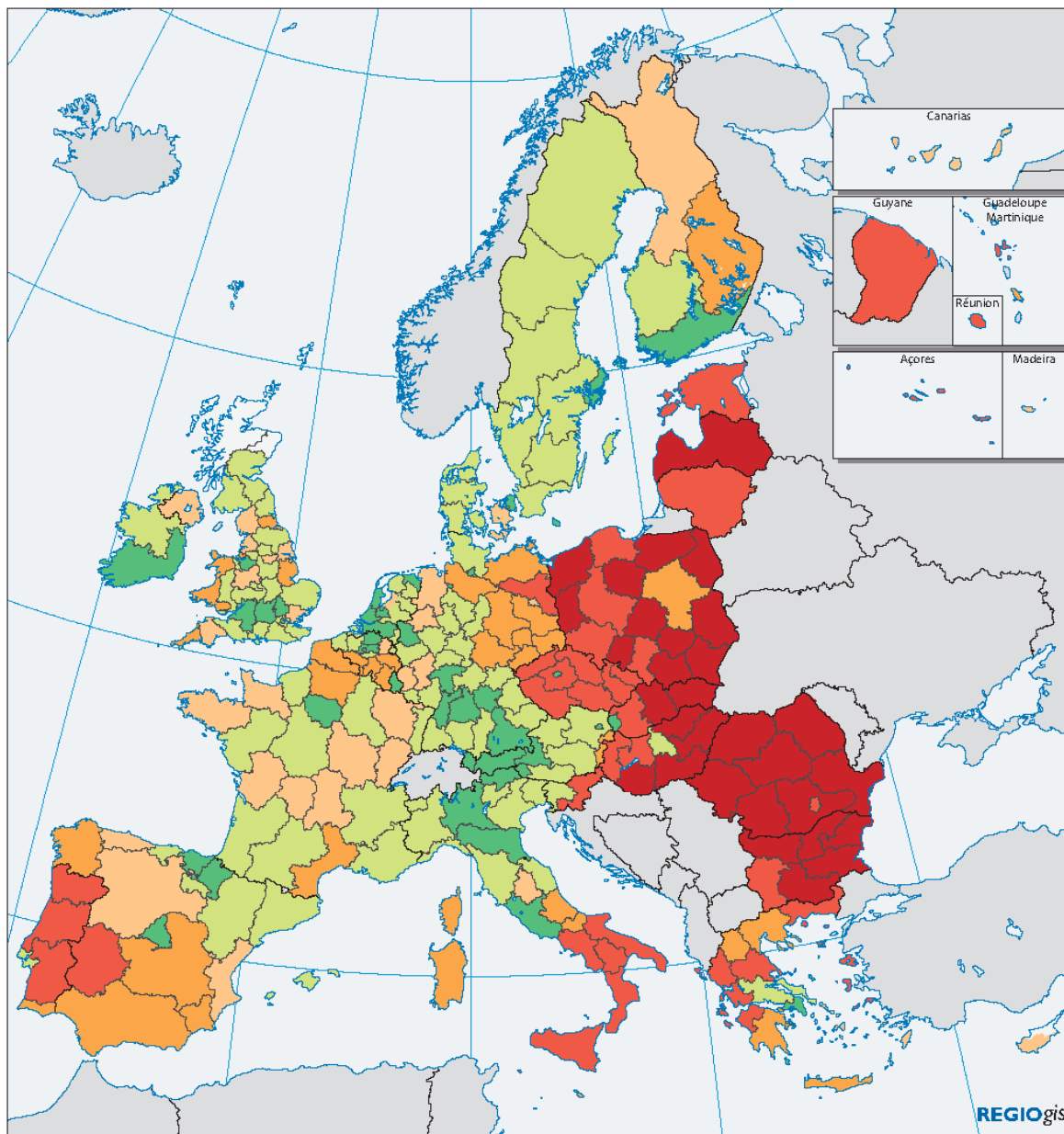
*In these regions, GDP/head figures tend to be overestimated because of commuter flows.*

Fast growing regions are often hosting important urban areas. All top ten movers are capital city regions. High growth rates are also observed in regions with a low level of GDP/head, like for instance Yugozapaden, Bulgaria whose GDP/head is only 52% of the

Country	Top ten regions movers	Change in GDP/head (PPS), index points
This table shows the ten regions in which GDP/head (PPS) increased fastest between 2000 and 2005		
SK	Bratislavský kraj	39
GR	Attiki	25
CZ	Praha	23
RO	Bucureşti – Ilfov	21
LU	Luxembourg (Grand-Duché)	20
HU	Közép-Magyarország	18
EE	Eesti	18
BG	Yugozapaden	16
UK	Inner London	14
IE	Southern and Eastern	14

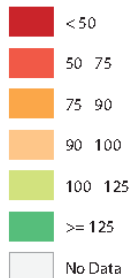
EU average but whose index has grown by 16 percentage points between 2000 and 2005. On the other hand, low growth rates are observed in regions with high GDP/head, particularly in Northern Italy or in some regions of Denmark, France, Germany, Sweden or Finland. For example, one of the lowest growth rate is in Provincia Autonoma Bolzano/Bozen where GDP/head decreased from 158% to 137% of the EU average over the period considered.

This suggests that poor regions are catching-up on the richest ones and is consistent with the fact that convergence among EU regions in terms of GDP/head has increased. Between 2000 and 2005, the coefficient of variation, which is a statistical measure of regional disparities, decreased by 7%. The trend is however worrisome for regions of Southern Italy and Portugal where both GDP/head and growth are relatively low.



**GDP/head (PPS), 2005**

Index, EU-27 = 100



Source: Eurostat



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## Share of knowledge workers

Senior officials, managers and professionals as a share of total regional employment

### Why does this matter?

Knowledge workers are defined by the first three ISCO categories<sup>1</sup>. They include managerial functions, highly qualified professionals as well as technical and scientific positions and cover most knowledge-based jobs

The share of employment in this type of occupation illustrates the shift to knowledge-based economy and the capacity to benefit from the global shift towards more intensive use of technology and sophisticated instruments of production. Knowledge-based jobs play a prominent role in the sectors in which Europe holds a comparative advantage. They therefore are a major factor of its competitiveness.

Knowledge workers account for 36.7% of employment in the EU-27. Between 2000 and 2006, employment in these categories increased by 3.4 percentage points.

### How do the EU regions score?

The share of knowledge workers differs significantly between European regions. In Praha, more than 60% of jobs fall in such categories while in Nord-Est in Romania, they only account for 16.8% of employment. The share of officials, managers and professionals is generally high in regions of Europe's core and/or in regions hosting major urban areas, often capital city regions. It is however much less in regions of Bulgaria, Greece, Romania, Slovakia and Spain.

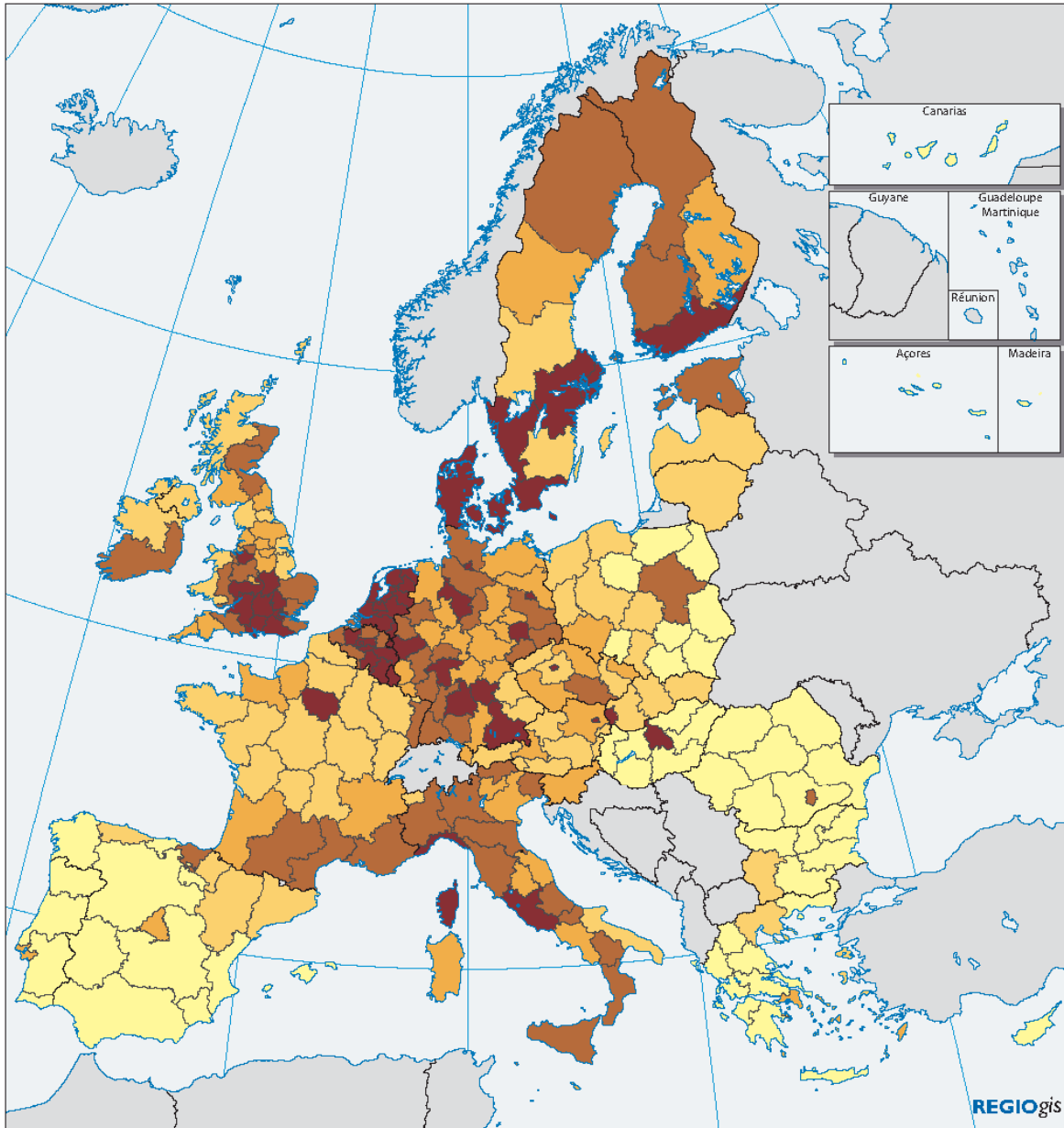
Country	Top ten regions in 2006	Share of knowledge workers on total employment, %
CZ	Praha	60.7
BE	Prov. Brabant Wallon	57.7
UK	Inner London	57.3
SE	Stockholm	56.9
NL	Utrecht	54.1
FR	Île de France	53.8
DE	Berlin	52.5
BE	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest	51.1
BE	Prov. Vlaams-Brabant	50.5
SK	Bratislavský kraj	50.2

The share of knowledge workers increased in most regions which reflect the relative specialisation of the EU economy in activities related to knowledge-based jobs.

Country	Top ten regions movers	Change in the share of knowledge workers, percentage points
This table shows the ten regions where the share of senior officials, managers and professionals increased fastest between 2000 and 2006		
FR	Alsace	9.2
RO	București-Ilfov	9.0
GR	Notio Aigaio	8.7
PL	Śląskie	8.7
AT	Steiermark	8.6
PL	Mazowieckie	8.0
PL	Região Autónoma da Madeira	7.7
GR	Kriti	7.7
PT	Algarve	7.5
ES	País Vasco	7.3

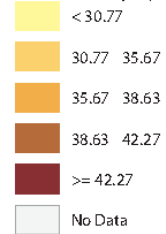
Changes in share however show no clear pattern. For instance, the regions with the highest and lowest shares (respectively Praha and Nord-Est) have both experienced substantial increase in the share of knowledge workers (respectively of 6.0 and 5.3 percentage points). Moreover, high growth regions can be found all over Europe and are not systematically urban regions. These observations may however reveal a trend towards more even geographical distribution of knowledge workers.

<sup>1</sup> The International Standard Classification of Occupations (ISCO) classifies jobs according to the tasks and duties undertaken.



**Share of knowledge workers, 2006**

% of total employment



EU 27 = 36.68 %  
 Share of senior officials, managers and (associate) professionals (ISCO classes 1,2 and 3) of total employment  
 Source: Eurostat (LFS)



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# Unemployment rate

## Why does this matter?

The **unemployment rate** is the number of people between the age of 15 and 74 who are out of work, looking for work and available for work divided by the number of people active in the labour market, i.e. those who are either employed or unemployed.

The unemployment rate is key measure of social cohesion. A high unemployment rate is often accompanied by poverty and other forms of social exclusion. It also shows whether a regional economy creates enough jobs in relation to the number of people who want to work. Strong disparities in unemployment rates create a strong incentive for people to move between regions or even countries.

At the European level, unemployment has remained just above 8% between 2000 and 2006 and only fell below to 7.2% in 2007.

## How do the EU regions score?

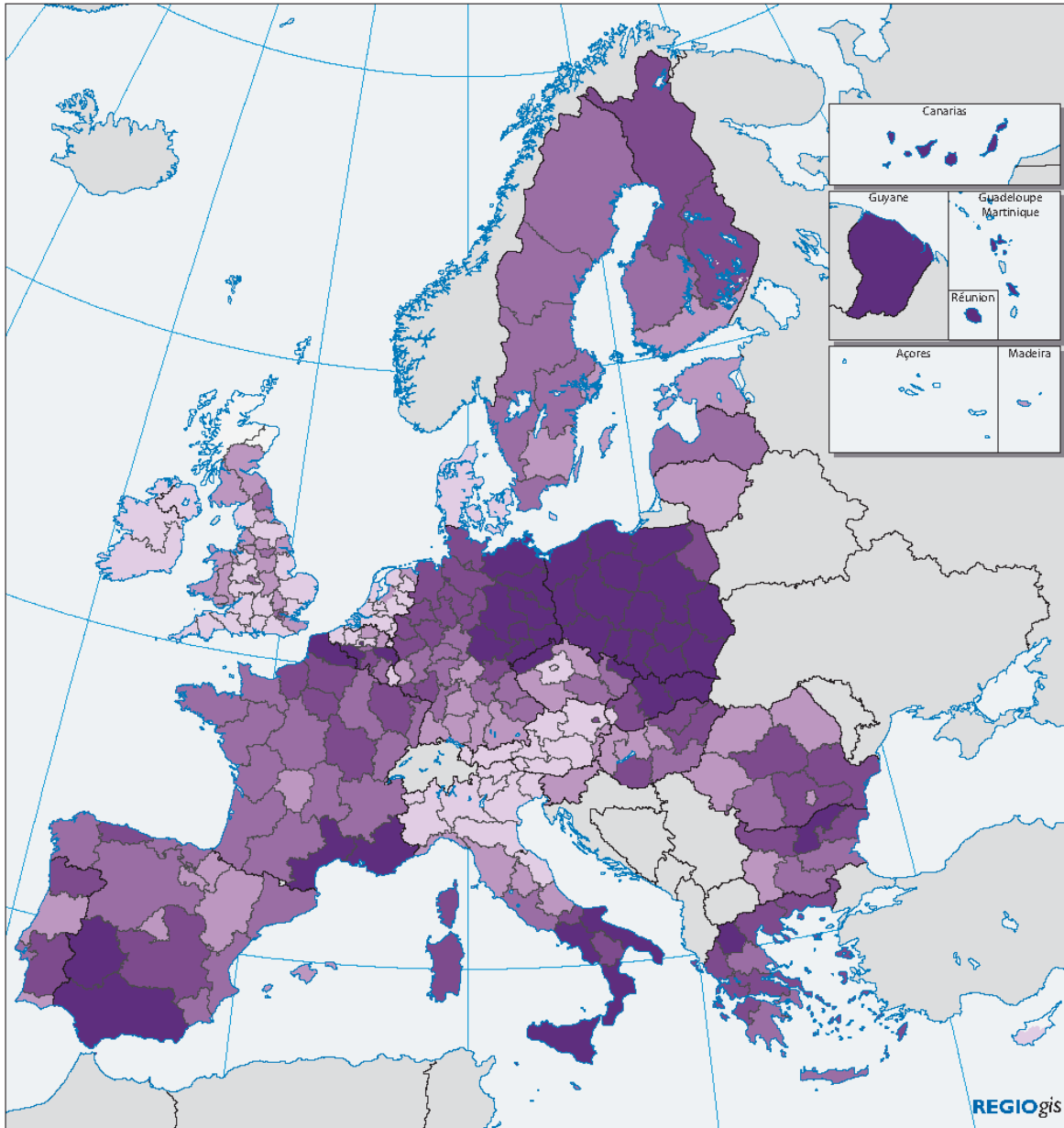
Regional disparities among the EU-27 regions remain high in terms of unemployment. The French overseas departments and Ciudad Autónoma de Ceuta have particularly high unemployment rates but their location outside the European continent explains a large part of these high levels. Unemployment rates over 10% can be found in Slovakia, East German Länder and in most Polish regions but also in some regions of Belgium, Southern Italy, France or Southern Spain. At the other end of the spectrum, regions like Zeeland and Provincia Autonoma Bolzano/Bozen have unemployment rates of respectively 2.7% and 2.6%.

Country	Top ten regions in 2006	Unemployment rate, %
FR	Guyane	28.5
FR	Réunion	28.3
FR	Guadeloupe	26.9
FR	Martinique	24.1
ES	Ciudad Autónoma de Ceuta	21.0
DE	Mecklenburg-Vorpommern	19.2
SK	Východné Slovensko	19.1
DE	Berlin	18.7
DE	Leipzig	17.9
DE	Sachsen-Anhalt	17.8

Despite the relative stability of the European unemployment rate between 2000 and 2006, regions with high unemployment rates were able to sharply reduce their unemployment rates. The ten top movers had an average unemployment rate of 22% which they reduced to only 11% by 2006. This provides a good example of the general reduction of disparities between regions with high and low unemployment rates that occurred over this period. The coefficient of variation, a statistical measure of regional disparities, decreased by almost 24% between 2000 and 2006.

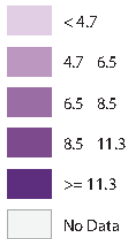
Country	Top ten movers	Change in unemployment rate, percentage points
This table shows the ten regions in which unemployment rate decreased fastest between 2000 and 2006		
IT	Calabria	-13.1
BG	Severoiztochen	-12.9
FR	Corse	-11.6
ES	Andalucía	-11.4
IT	Campania	-10.8
BG	Yugoiztochen	-10.7
IT	Sicilia	-10.5
LT	Lietuva	-10.3
ES	Extremadura	-10.2
BG	Severozapaden	-10

Unemployment rates dropped significantly in the Baltic States, Bulgaria, Southern Italy and Spain. Some regions, however, did not follow this trend. Several regions in Portugal and Western Germany witnessed a substantial increase in their unemployment rates despite levels which were close or above the EU average in 2000. In the UK unemployment disparities decreased through a slight increase in the South-East and a decrease in the North and West.



**Unemployment rate, 2006**

% of labour force



EU 27 = 8.2  
Source: Eurostat



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