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# Growing Regions, growing Europe

Fifth progress report on economic and social cohesion

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European Commission

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The publication of the fourth Cohesion Report and the Cohesion Forum last year launched a wide public consultation on European Cohesion Policy and the key challenges it will have to face in the years to come.

This fifth Progress Report provides me with the opportunity to present an overview of the many responses to the consultation. It has been a very rich and remarkable debate indeed.

The importance attached to our policy throughout the European Union is reflected in the more than one hundred contributions addressed to the Commission. Many Member States, regional and local authorities, economic and social partners, the civil society, European interest organisations, and academic and research institutes have provided their ideas, suggestions and sometimes useful criticisms. They all contribute to the current debate, led by the Commission, on the future of Cohesion Policy.

The content of all these contributions demonstrates the impressive support for European Cohesion Policy and the clear demand for its continuation after 2013. Our policy is perceived not only as an instrument to address the significant disparities in the enlarged European Union, but also as a policy to develop the competitiveness of all the European regions and promote sustainable development throughout the European territory. In other words, the consultation confirms that European Cohesion Policy is probably more than ever at the centre of some of the main strategic priorities for the Union for the coming decades.

This debate has just started and other important occasions will mark the preparation of the proposal for the reform of the policy, which the Commission will present within the context of the EU budget review.

This progress report also provides, for the first time, an analysis of the sectoral composition of regional economies, spotlighting those sectors that are driving growth and regional convergence.

The analysis shows that the poorest regions of the Union are going through a dramatic restructuring process that is shifting employment and economic activity to more productive and competitive sectors. These sectors typically achieve their highest growth rates in Convergence regions. European Cohesion Policy is supporting this shift towards higher value-added activities and more knowledge-based work through investments in better business infrastructure and services and training of the labour force. A similar process is operating in those regions that receive transitional support under European Cohesion Policy, with clear shifts to the sectors where the EU as a whole is generating the highest growth.

Finally, European Cohesion Policy supports key investment, particularly in R&D and innovation, in the most developed regions of the Union, which face their own competitive challenges in global markets. Although these regions invest three times as high a share of GDP in R&D as the less developed regions do, they continue to lag behind their world competitors in terms of both public and private R&D expenditure.

European Cohesion Policy has undergone a significant transformation in recent years, reaffirming its role as a key allocative tool at European level in support of growth, competitiveness and job creation. While it is too early to draw conclusions for the policy beyond 2013, the ideas emerging from the public consultation and the way the policy is accompanying economic modernisation in the regions of the EU point to some of the main issues for the future.



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#### Introduction

In September 2007, the Commission launched a public consultation on the challenges with which cohesion policy will be confronted in the coming years to collect ideas on the priorities, organisation and governance of the policy.

Cohesion policy is anchored in Article 158 of the EC Treaty, which states that the Community aims to promote harmonious development and that with this purpose it shall develop and pursue its actions leading to the strengthening of economic and social cohesion. The Lisbon Treaty, which is at present in the ratification process, adapts this text in referring to economic, social and territorial cohesion.

The consultation has to be seen in the larger framework of the ongoing budget review, to which it contributes. It has been complemented by other important events such as the informal meeting of the Ministers responsible for regional development which took place in the Azores on 23-24 November 2007; the high level conference organised by the Slovenian presidency in Maribor on 7-8 April 2008; and the opinions which the European Parliament<sup>1</sup>, the Committee of the Regions<sup>2</sup>, and the European Economic and Social Committee<sup>3</sup> have adopted on the Fourth Cohesion Report.

A further important milestone in 2008 will be the adoption by the Commission of a Green paper on territorial cohesion, whose main purpose is to launch a wide, public debate on the implications of the introduction of the notion of territorial cohesion in the Treaty, particularly in the context of cohesion policy.

In 2008, the Commission will also adopt a Communication on the renewed social agenda. Building on the results of a wide public consultation on Europe's "social reality", it will outline ways in which Europe can respond to changing social realities, in particular how the Union's policies can be harnessed to promote opportunities, access and solidarity.

The first part of this report provides a synthesis of the contributions received between September 2007 and February 2008. This first phase of the debate helps to identify issues for discussion and direction for reflection, which the Commission will take into serious consideration in the context of the budget review.

The second part of the report provides a more in-depth analysis of major regional trends. The theme of this progress report is European growth sectors, whose performance in the regions will, to a large degree, determine the level of regional economic development in the years to come.

## 2

## Cohesion policy: the state of the debate

The Commission received more than one hundred contributions<sup>4</sup>, mainly from stakeholders close to the management of the policy, representing more than half the Member States (accounting for almost 80% of the EU population); a large number of regional authorities; a majority of regional and local associations; economic and social partners; civil society organisations; academic and research institutions; and some citizens.

Most of the responses, and particularly those of national governments, do not represent final positions. This is normal

given the early stage in the debate and the wider discussion on the EU budget review.

The public consultation confirms that interest in cohesion policy remains pronounced. Indeed, the first general conclusion which can be drawn from the discussion is the recognition by stakeholders of the important role cohesion policy plays in the construction of the European Union and the support for continuation of that policy. Any attempt to re-nationalise the policy is almost unanimously rejected.

Many contributions confirm that cohesion policy guides and fosters growth across Europe; promotes investments that would not have been undertaken otherwise; supports

<sup>1</sup> A6-9999/2008 adopted on 21 February 2008.

<sup>2</sup> COTER IV-011 adopted on 29 November 2007.

<sup>3</sup> ECO/209 adopted on 13 December 2007.

<sup>4</sup> See http://ec.europa.eu/regional\_policy/conferences/4thcohesionforum/all\_contrib\_en.cfm?nmenu=6

competitiveness in the most vulnerable regions; enhances social progress and solidarity; upgrades physical, social and human capital as drivers of growth, innovation potential, administrative capacity and modernisation of the administration; encourages multi-annual strategic and financial management; promotes transfers of know-how and best practices between regions and Member States; and fosters an evaluation and monitoring culture. Similarly, most contributions value the partnership culture that the policy promotes. In line with the results of a recent Eurobarometer<sup>5</sup> survey, the consultation confirms the role of cohesion policy in increasing the visibility of the EU to European citizens.

#### 2.1. Objectives and priorities

All contributions agree that the main objective of cohesion policy is the reduction of economic and social disparities between the levels of development of European regions. Lagging regions must thus remain the focus of the policy. Yet, a majority of contributions – along with the European Parliament – argues that the policy should cover the whole territory of the EU, considering that cohesion policy is not a simple mechanism of solidarity, but also aims at fostering the endogenous development potential of European regions.

The large majority of stakeholders recognises territorial cooperation as an essential part of cohesion policy and appreciate that it is now a "fully-fledged" objective. They underline that territorial cooperation is one of the best examples of the added value of this policy and, for this reason, should be strengthened.

The Fourth cohesion report identified a series of challenges with which regions and Member States are and will increasingly be confronted: globalisation, demographic change and social tensions, climate change, and increased energy prices. While it is widely admitted that cohesion policy should also address such challenges, most of the contributions point out that cohesion policy cannot be the only instrument, not even the principal one. Some consider that these challenges are already being addressed through the delivery of the Lisbon and Gothenburg Agendas. Others recall that tackling these challenges should not overshadow the main objectives of cohesion policy as enshrined in the Treaty.

Some contributions urge the Commission to complement GDP per head in PPS with other measures of well-being and standards of living.

Concerning the content of cohesion policy, a consensus seems to emerge at this stage on the following cross cutting themes:

• Competitiveness is at the heart of cohesion policy. The requirement of "earmarking" a significant share of the financial resources for the key investments linked to the renewed Agenda for growth and jobs is clearly supported. In particular, research, innovation and upgrading skills to promote the knowledge economy, development of human capital through education and training, adaptability, support for business activities (especially, small and medium enterprises), strengthening of institutional capacity and development of an entrepreneurship culture are deemed as key areas in which investments should be concentrated.

Active labour market policies are also at the heart of the ac-

- tions proposed to boost employment, strengthen social cohesion and reduce the risk of poverty. A significant number of participants consider that cohesion policy should contribute to Europe's social dimension by improving employment prospects of the most vulnerable groups such as youth, elderly, disabled, immigrants and minorities. Social and economic partners and civil society organisations stress the important role of the social economy in producing quality jobs, enhancing innovation, contributing to the development of rural areas and providing a number of services of general interest. They also point out the contribution of capacity building to the enforcement of principles of good governance and partnership. Finally, some voices representing civil society argue that cohesion policy should support groups that have special difficulties entering the labour market.
- The third cross cutting theme is sustainable development.
   Many contributions consider that cohesion policy should strengthen its orientation towards the delivery of the objective of the Gothenburg Agenda. In particular, the policy could contribute to reducing greenhouse gases emissions through mitigation policies aimed at improving energy efficiency and promoting the development of renewable energies.

In addition to the above themes a number of other issues received considerable attention.

The inclusion of territorial cohesion in the Lisbon Treaty is generally welcomed. Some contributions however urge the Commission to develop a definition of territorial cohesion and indicators for better understanding this concept. At the same time, several national governments consider that territorial cohesion is already integrated within cohesion policy, and that the economic, social and territorial dimensions of cohesion cannot be separated.

<sup>5</sup> http://ec.europa.eu/public\_opinion/flash/fl\_234\_en.pdf

Territorial cohesion is seen, notably by regional and local actors, as an opportunity to strengthen the role of regional and local authorities and other actors in the implementation of the policy. Several contributions stress the role of urban areas and their interdependence with rural areas as important dimensions of economic, social and territorial cohesion. Cities are often identified as places characterised by significant social exclusion, poverty and unbalanced development. Existing mechanisms in favour of some specific areas such as the outermost regions or the northern sparsely populated areas are not questioned.

Many are also confident that the notion of territorial cohesion will help to better integrate a territorial dimension in the design and implementation of European sectoral policies.

A consensus seems to emerge in favour of more flexibility under territorial cooperation so that regions can cooperate with regions other than neighbour regions or regions belonging to the same geographical area. Cooperation with regions and countries neighbouring the EU is also considered essential.

### 2.2. The governance of cohesion policy

The reform of cohesion policy towards a more strategic approach is supported by the majority of the contributions.

Many mention that programme implementation has just started and a comprehensive assessment cannot be made until the results of evaluations become available.

Yet, a significant majority of stakeholders calls for further clarification in the allocation of responsibilities between the different institutional levels (Commission, Member State, regions and other players). Many stakeholders, particularly at the regional and local level, would appreciate further decentralisation of responsibilities. They also underlined, especially for the European Social Fund (ESF), the importance of delivery at the local level. Similar statements came from the economic and social partners and the civil society. These stakeholders also insist on a more inclusive definition of the partnership principle.

Simplification is another demand that emerges from a majority of contributions. Many contributions expressed concern as regards the newly introduced "one programme-one fund" principle, which may not facilitate the implementation of the policy.

There are many complaints about "red-tape" and auditing requirements related to the implementation of the policy. These are perceived as discouraging many potential beneficiaries and hindering the implementation at local level of important projects. The Commission is urged to simplify the existing procedures at least for small programmes.

Another important matter frequently mentioned concerns the coordination between the ERDF, the ESF and the Cohesion Fund. Some contributions call for their integration into a single Fund for the sake of a more coherent strategic development.

Opinions seem to be divided regarding the opportunity to use cohesion policy as an instrument to react immediately to asymmetric shocks or important crises triggered by processes of restructuring: while some advocate more flexibility, others point out that cohesion policy is first and foremost a structural policy characterised by strategic planning with a medium and long-term perspective.

A number of contributions insist on further exploring the use of means of financing other than grants such as bank loans, micro-credits, risk capital instruments or public-private partnership instruments.

A final, important issue raised by the consultation concerns coordination between cohesion policy, other Community policies, and national policies. Many contributions consider that Community sectoral policies should take better account of regional aspects. In addition, many stakeholders consider important to develop coherent, integrated approaches, particularly between cohesion policy and rural development.

Coordination with national policies is also considered critical. Some stakeholders, for example, consider that the principle of additionality should be strengthened. Moreover, some economic and social partners believe that cohesion policy should be driven by the Integrated Guidelines for Growth and Jobs and the National Reform Programmes.

#### 2.3. Next steps

The debate on the future of cohesion policy has just started and will continue in the coming years. Among the many important events which will mark this debate, it is worth mentioning the ongoing public consultation on the budget review, the public consultation on the Green Paper on territorial cohesion which the Commission will launch in autumn 2008, and the ministerial and high-level events which will be organised under the different Presidencies.

The Commission will report on the progress of this reflection in the Sixth progress report on economic and social cohesion in spring 2009.

In due course, the Commission will present its report on the 2008/2009 budget review setting out its overall vision for the structure and direction of the EU's future spending priorities.



## Convergence, growth and economic restructuring among EU regions

Convergence among European regions has remained strong in recent years, leading to a marked narrowing of disparities in GDP per head, employment and especially unemployment rates. This trend is largely driven by improvements in the least prosperous regions (See Figure 1).

For the purpose of the analysis which follows, regions have been grouped into three categories: Convergence, Transition<sup>6</sup>, and Regional Competitiveness and Employment (RCE) regions, each with a distinct socio-economic profile.

Convergence regions still have a considerably lower GDP per head, at 58% of the EU average while Transition regions are getting closer to the EU average. Between 2000 and 2005, both groups of regions reduced the gap with the EU average by around 5 percentage points (see Table 1 and fiche on GDP).

Employment rates are low at 58% in Convergence regions, compared to 68% in RCE regions. Since 2000, Convergence regions have not been able to reduce this gap. Transition regions, however, did reduce the gap and now have a 63% employment rate, but remain well below the RCE regions (see Table 1). Unemployment rates are still four percentage points higher in Convergence than in RCE regions, but this gap was almost twice as big in 2000.

## 3.1. Regional distribution of European high growth sectors

This section discusses the sectoral structure of regional economies focussing on the EU growth sectors (see annex). At the regional level, three growth sectors are analysed: (1) Financial and business services, (2) Trade, transport and communication and (3) Construction. The growth sector, high and medium-high tech manufacturing, is part of the industry sector and thus can not be readily identified at the regional level.

The three types of regions differ in terms of economic structure, growth trends and productivity. For example, productivity in Convergence regions is half that in RCE regions or less (see Table 3) and employment shrank in Convergence regions while it grew in the other two types of regions.

#### 3.1.1. Convergence regions

The three growth sectors are less important in Convergence regions, where they account for only 40% of employment compared to 50% in the other regions. The share of **Financial** 

**and business services** is especially low. Growth of GVA and especially of employment in this sector, however, is much higher than in other sectors. **Trade, transport and communication** also experienced a strong increase in both employment and GVA, while the growth rates in **Construction** are similar to the EU averages.

**Industry** is more important in Convergence regions than in the others and recorded the highest GVA growth rate. Employment in industry declined but less than in the other regions. Nevertheless, industrial productivity is still a third of that in RCE regions. Employment in high and medium-high-tech manufacturing, however, grew by 1% between 2000 and 2005.

**Agriculture** remains an important sector in Convergence regions accounting for more than 15% of employment, five times the share in RCE regions. This happens in a context of falling employment in this sector accompanied by productivity increases. This means that despite strong employment increases in the growth sectors, total employment declined in the Convergence regions.

#### 3.1.2. Transition regions

Transition regions have the same share of employment and GVA in the three growth sectors as RCE regions, but their share of **Financial and business services** is much smaller. With annual growth rates of 4% this sector has grown faster than any other, but the difference remains large.

The two other growth sectors, Trade, transport and communication and Construction, also grew above average. In Transition regions, especially the share of the Construction sector is much higher than in the other regions. This can be partly explained by the strong economic growth, rising incomes and continuing need to upgrade some of the physical infrastructure. In some regions, the growth of construction is also partially due to demand for second homes and tourist accommodation. The highly cyclical nature of this sector, however, leaves these economies vulnerable.

The share of **Industry** is less important in Transition regions than in the other two types of regions.

<sup>6</sup> Phasing in and Phasing out regions were grouped together as Transition regions since both receive transitional support.

<sup>7</sup> See Commission Communication: Employment in rural areas, COM(2006) 857.

### 3.1.3. Regional competitiveness and employment regions

In RCE regions, **Financial and business services** experienced the highest growth in employment and GVA showing a growing specialisation. The two other growth sectors have a lower share of GVA and employment than in the other two regions and experienced growth rates close to the EU average.

The GVA share of **Industry** in RCE regions is comparable to that of Convergence regions but employment in this sector is significantly lower in RCE regions, reflecting the results of a successful shift towards higher value added activities in this sector. Employment in this sector and in high and medium high-tech manufacturing declined.

R&D expenditure as a share of GDP is almost three times higher in RCE regions than in Convergence. However, competition in innovation is becoming global which means that the EU has to compete globally. RCE regions spend 2.1% of their GDP on R&D, but the US spends 2.5%. Also the share of GDP going to R&D in the top 10% US States is a quarter higher than in the equivalent EU regions.

RCE is the largest of the three groups and as a result also more diverse. The economic structure varies considerably. Some are specialised in Financial and business services, such as Luxembourg and Île de France with at least 40% of their GVA in this sector. Other regions rely heavily on Trade, transport and communication such as for example Tirol, Praha and Illes Balears with at least 30% of their GVA in this sector. Economic performance also varies. Between 2000 and 2005, 17 RCE regions experienced a decline in employment and 22 had a GDP growth rate below 0.5%.

## 3.2. The contribution of high growth sectors to convergence

The analysis above shows that the growth sectors have made an important contribution to convergence both in Convergence and Transition regions, but the pattern varies.

In Convergence regions, the three growth sectors have contributed to substantial employment creation, but not enough to offset the significant employment reductions in agriculture. GVA growth was also strong in the growth sectors especially in Financial and business services and Trade, transport and communication.

GVA growth, however, was higher in Industry, leading to a high and growing share in this sector. Combined with a high share of employment, this trend may present a risk as several industrial sectors have been in decline at the EU level (see figure 2). Within industry, the share of employment in high and medium-high tech manufacturing, the sector where the

EU has the strongest competitive advantage, is only 24% in Convergence regions as compared to almost 40% in RCE. Since 2000, Convergence regions have only reduced this gap by 1 percentage point.

National data shows that GVA is growing faster in high and medium-high tech than other manufacturing sectors in most Member States. Yet some still have a low share of manufacturing GVA in high and medium-high tech, in particular in Romania, Bulgaria, the Baltic States, Greece and Portugal. This and their low productivity in the sector may leave them vulnerable to increased global competition.

Transition regions are catching up rapidly with RCE regions thanks to the strong performance of the three growth sectors and high and medium-high tech manufacturing. As a result, the economic structure of Transition regions is becoming more and more like that of RCE regions.

### 3.3. Education, skills and knowledge workers

Skills and qualifications are an important determinant of individual income and employability and a substantial contributor to labour productivity. They also indicate to what degree regional economies have shifted towards a more intensive use of knowledge. Yet, the EU invests only 1.2% of GDP in higher education where the US invests almost 2.9%.

The share of highly educated people aged 25-64 is considerably lower in Convergence regions than in RCE regions, 17% and 25% respectively. Still, the share has increased equally between 2000 and 2006, with a slightly higher increase in Transition regions, which have now almost reached the same share as RCE regions.

The share of human resources in Science and Technology (HRST core)<sup>8</sup> also lags in Convergence regions as compared to RCE regions, 12% compared to 17%. But Convergence regions have been able to reduce that gap since 2000 by one percentage point. The use of HRST core is particularly high in knowledge intensive services such as health and education and high and medium-high tech manufacturing.

The overall share in the Convergence regions in 2006 was still 10 percentage points lower than in the RCE regions. Growth in the share of knowledge workers is nevertheless high. It increased by 3.4 percentage points between 2000 and 2006 and the increase was the same in Convergence and RCE regions.

The share of knowledge workers<sup>9</sup> is particularly high in capital regions and other major metropolitan regions which host major headquarters and specialised services. The share of knowledge

<sup>8</sup> See SEC(2008) 2047 for definition.

See SEC(2008) 2047 for definition.

workers tends to be low in Portugal, Spain, Greece and Bulgaria even in their capital region. The share increased particularly in many regions in Spain, France, Greece, Austria and Slovenia, indicating that the shift to the knowledge economy is not an exclusive affaire of large metropolitan regions.

#### 3.4. Conclusions

This brief analysis has shown that European growth sectors have largely contributed to convergence. However, important differences in the economic structure of the three groups of regions remain and the pattern of catching-up differs between Convergence and Transition regions. This has several implications from a policy point of view.

Efforts to foster European high growth sectors, i.e. those with above average employment or GVA growth, seem justified. Not only are these sectors the ones in which the European economy has its clearest global growth perspective, they can also be powerful motors for the EU convergence process.

Moreover, the analysis shows that Convergence regions are undergoing a major economic restructuring. Substantial employment is being created in the service sector, while agriculture is shedding even more employment. GVA growth is high especially in industry and services and productivity growth is three times higher than in RCE regions. Such restructuring requires a tailored policy response.

Convergence regions should facilitate the shift of employment to services, especially to sectors which do not require high education levels, and continue to modernise their agriculture sector. As industry is and will remain an important sector in Convergence regions, policy should facilitate a progressive reorientation of the industry towards high productivity and high value added activities to avoid specialisation in industrial sectors particularly exposed to international competition and offering poor growth prospects.

Convergence regions should also aim to improve the education level of the labour force as shifting to higher value added activities will increase the demand for such labour. This will also influence the speed at which they adopt new technologies and help to reduce the productivity gap.

Finally, the high productivity levels in RCE regions give these regions an edge not only in Europe but also in the world. In part, this high productivity is due to strong investments in R&D, which are much higher than in Convergence regions. Yet to maintain a global edge, these regions have to be able to compete with other world competitors, which invest even higher shares in R&D and higher education. This clearly underlines the benefit of the increasing orientation of cohesion policy in RCE towards more investments in innovation and human capital.

## **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)

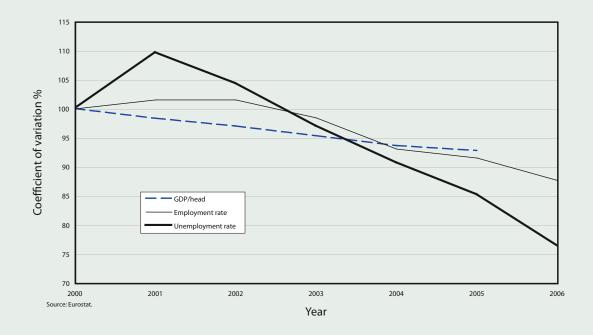


TABLE 1: MAIN CHARACTERISTICS FOR THE CONVERGENCE, TRANSITION AND REGIONAL COMPETITIVENESS AND **EMPLOYMENT REGIONS** 

	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

<sup>\*</sup> DEE0 (Sachsen-Anhalt) taken into account as Convergence region / \*\* based on NUTS breakdown valid 1/1/2007 / \*\*\* Excluding two UK, PT, DE and one Finnish region (no data) / \*\*\* excl. UKM5 and UKM6 (no data) / Source: Eurostat and DG REGIO calculations.

TABLE 2: EMPLOYEMENT AND GVA SHARE AND CHANGE IN SIX SECTORS, 2000-2005

SHARE IN 2005 IN %		EMPLOY	MENT		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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share of EU27	27.5	6.1	66.4	100.0	12.9	5.7	81.5	100.0

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
Total	-0.7	0.9	0.5	0.2	2.4	2.9	1.6	1.8

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
Total	48	94	125	100

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
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.	···è····	••••••	•••••	•••••••

Source: Eurostat and DG REGIO calculations.

## 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.

The Education sector, which was not retained as growth sector due to its low GVA growth, is also likely to continue to grow given

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 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):

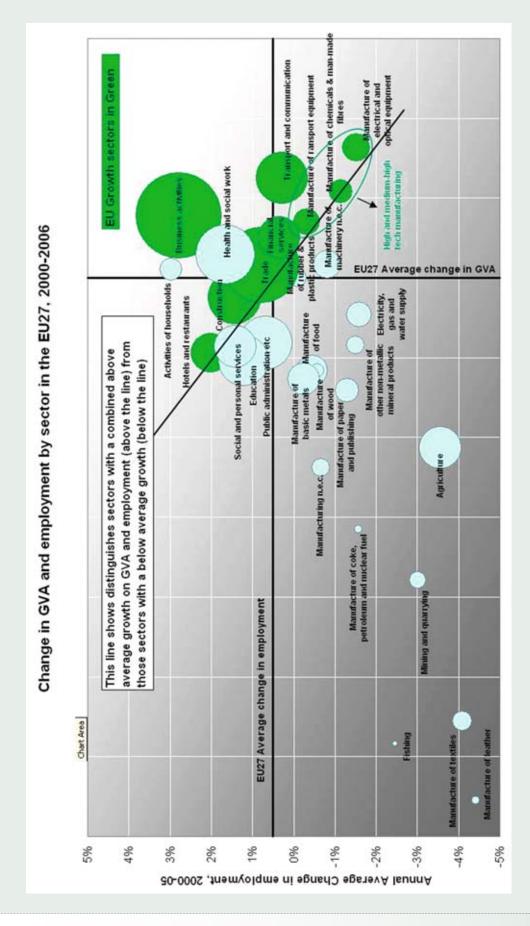
- Two services sectors with high productivity levels: Business activities (K) and Financial services (J).
- Three services sectors with either high employment or GVA growth and average productivity: Trade (G); Hotels and restaurants (H); and transport and communication (I).
- Construction which experienced 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 cannot 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

VAIA A	T NATIONAL AND EUROPEAN LEVEL				Data at the regional level	
IACE ODE	FULL NAME OF SECTOR	PRODUCTIVITY (EU27=100)		NACE CODE	FULL NAME OF SECTOR	GROWTH SECTOR?
A	Agriculture, hunting and forestry	29		A . D	Agricultura hunting and fishing	No
В	Fishing	66		A+B	Agriculture, hunting and fishing	No
C	Mining and quarrying	216				
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	C+D+E	Industry	In part
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	Υ	F	Construction	Υ
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods	77	Y	G+H+I	Trade, transport	Y
Н	Hotels and restaurants	66	Y		& communication	
I	Transport, storage and communication	122	Υ			
J	Financial intermediation	207	Υ	J+K	Financial and	Υ
K	Real estate, renting and business activities	189	Y		business services	
L	Public administration and defence; compulsory social security	95				
M	Education	74				
N	Health and social work	77		L thru P	Other services	No
0	Other community, social and personal service activities	88				
P	Activities of households	29				



## 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:

### I. 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.

#### II. 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.

#### III. 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.

## **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 Gross Value Added 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?

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, %

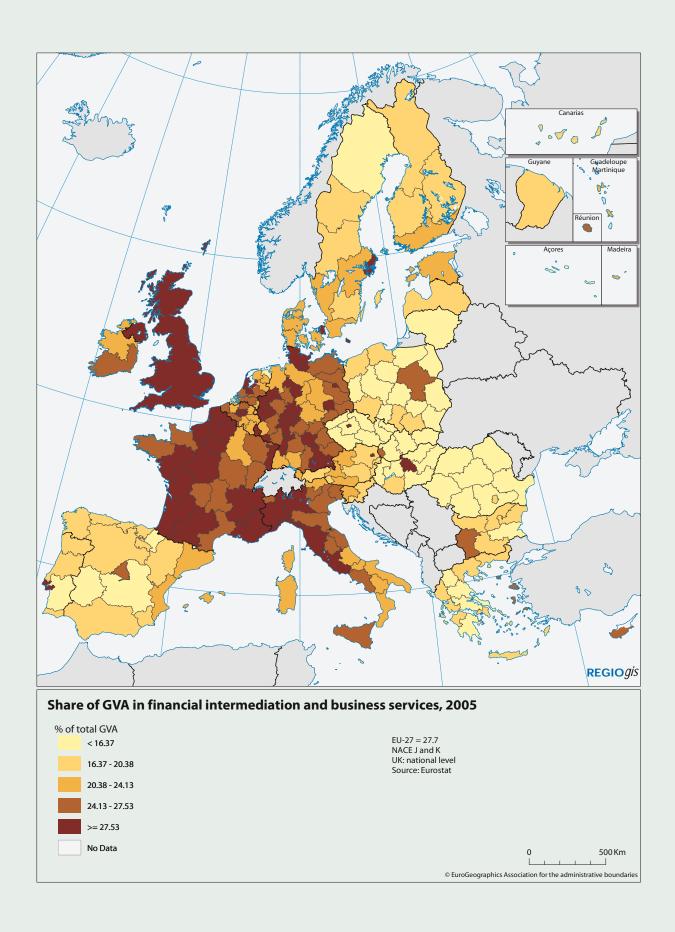
This table shows the ten regions in which financial and business services GVA grew fastest between 2000 and 2005

RO	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

The share of GVA in financial and business services is the highest in regions located in Belgium, France, Germany, Italy, the Netherland and the United Kingdom. As reflected by the top ten regions, such activities are almost systematically hosted 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 qualified and productive manpower and generally constitutes a major source of economic growth.



## 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?

Country	Top ten regions in 2006	Share of employ- ment 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

Country	Top ten regions movers	Change in the share of employment in KIS, percentage points
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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

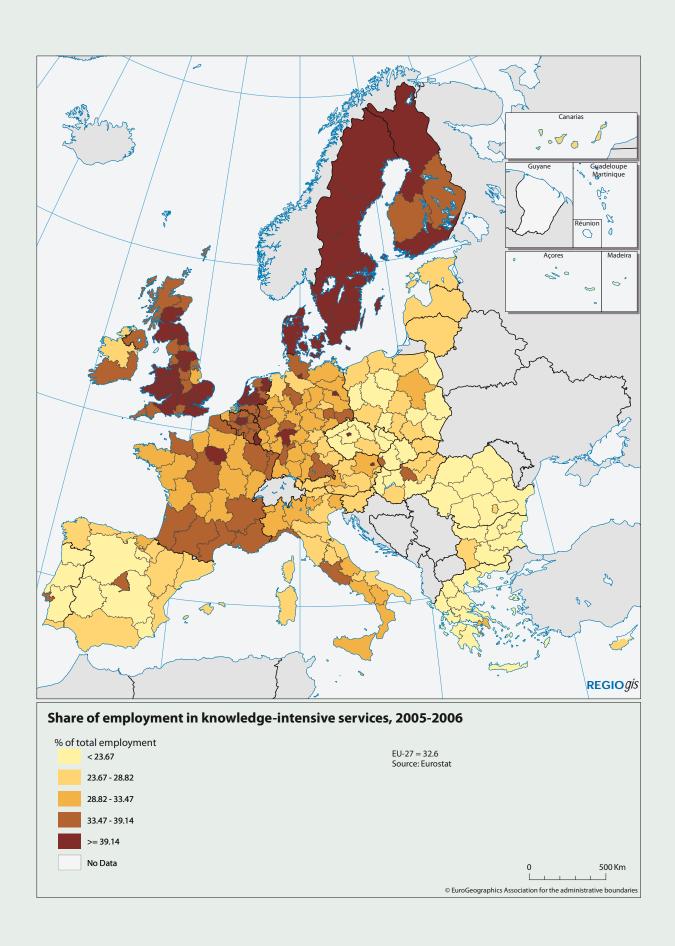
Most regions with a high share of employment in KIS are either capital city regions or regions hosting an important urban area. For those regions, KIS sometimes account for more than 50% of employment with Inner London topping at 57%. Share of employment in KIS is much lower in Cohesion countries, particularly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

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 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 EU27 total GVA and 14.4% of EU27 employment. Growth in the sector is slightly superior to the EU27 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	Notio Aigaio	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

Country	Top five countries	Annual
	movers	average change in employment in trade, %

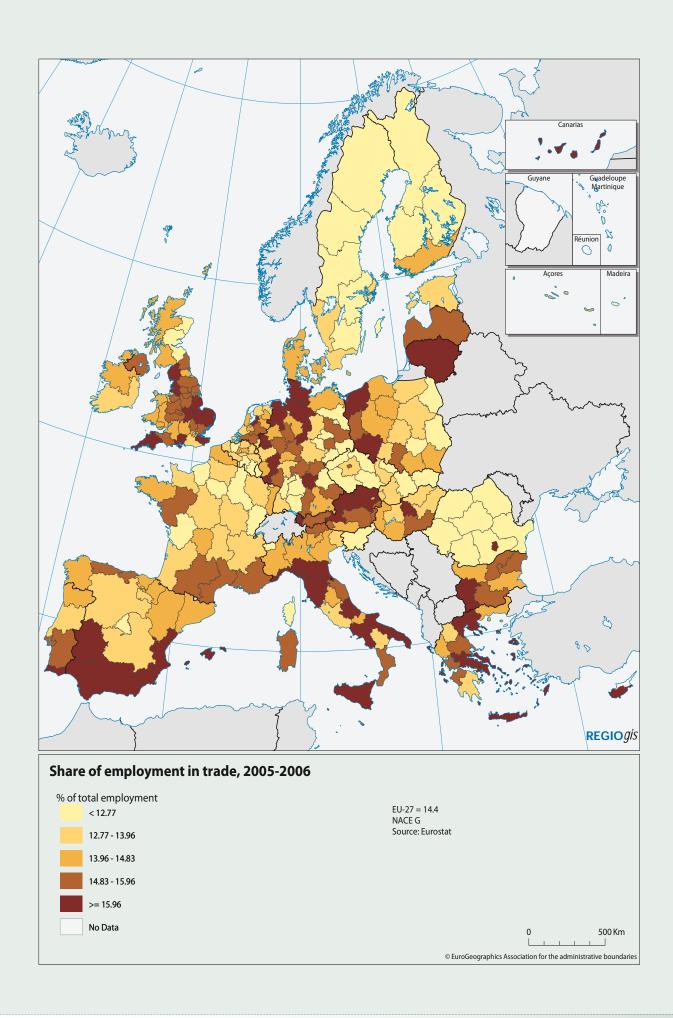
This table shows the five countries in which employment in retail and wholesale grew fastest between 2000 and 2005

SK	Slovensko	7.3
RO	România	5.0
	България / Bulgaria	4.9
LV	Latvija	3.4
IE	Éire / Ireland	2.9

Due to lack of data at the regional level, growth of the sector is examined at the national level. 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.

Employment in trade has generally increased, except in the Czech Republic, Denmark, the Netherlands, 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 sector as disposable incomes rise.

<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 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 EU27 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
ΙΤ	Provincia Autonoma Bolzano/Bozen	11.0
PT	Região Autónoma da Madeira	10.6
AT	Salzburg	9.7

Country	Top five countries movers	Average annual change in employment in hotels and restaurants, %
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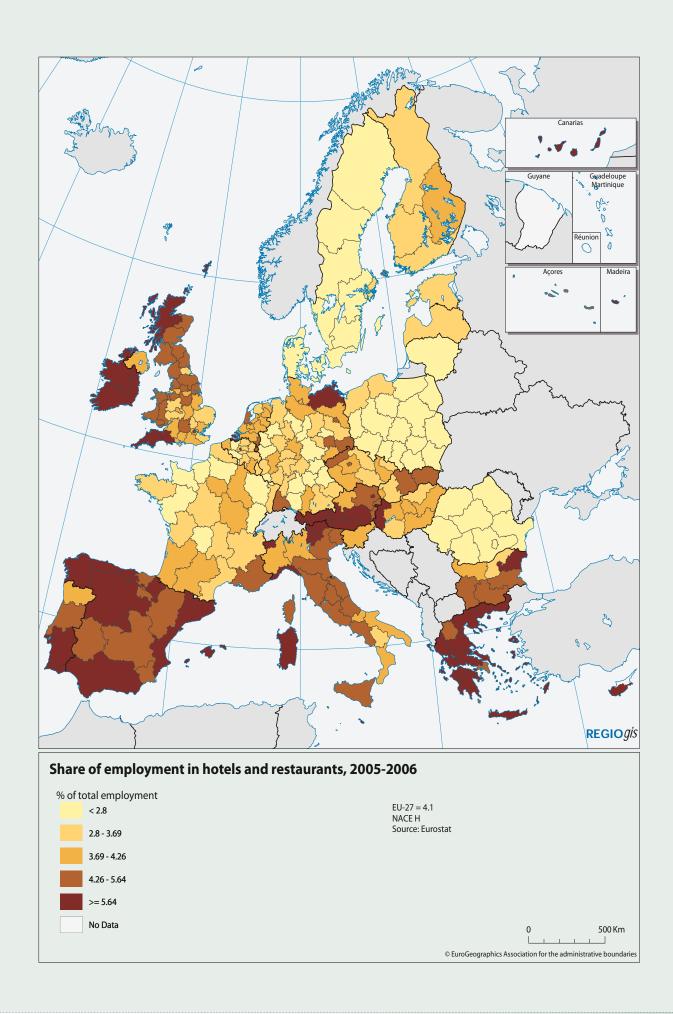
This table shows the five countries in which employment in hotels and restaurants grew fastest between 2000 and 2005

*******************************	•	•••••••••
BG	Balgarija	5.1
ES	España	4.7
LV	Latvija	3.4
IT	Italia	3.3
PT	Portugal	3.0

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. Employment growth is generally high in countries with an important tourism industry like Bulgaria, Spain, Italy and Portugal.

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 were GVA in hotels and restaurants decreased by 2.4% while employment increased by 3.0%.

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



## Share of Gross Value Added 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?

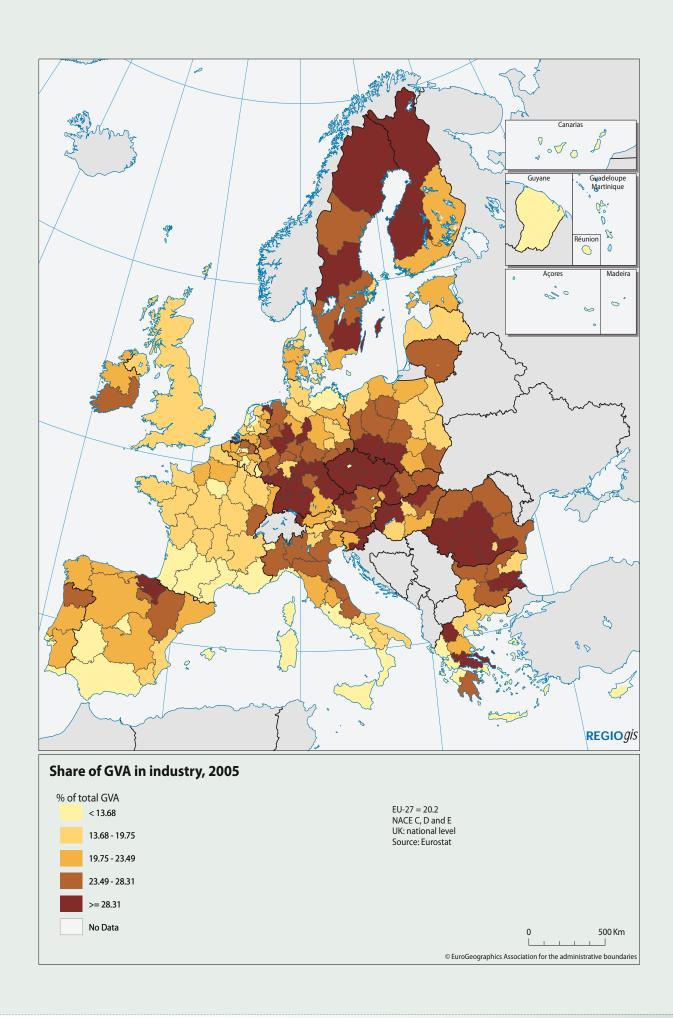
Country	Top ten regions in 2005	Share of industry on total GVA, %
NL	Groningen	44.7
CZ	Moravskoslezsko	44.3
HU	Közép-Dunántúl	42.4
GR	Sterea Ellada	41.1
CZ	Severozápad	39.8
SK	Západné Slovensko	39.1
CZ	Severovýchod	38.2
CZ	Střední Čechy	38.1
DE	Braunschweig	37.6
HU	Nyugat-Dunántúl	37.5

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 movers	Annual average change in industry GVA, %
This table shows th grew fastest betwe	ne ten regions in whi een 2000 and 2005	ch industry GVA
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

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 Stares 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.

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 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.

#### How do the EU regions score?

Country	Top ten regions in 2006	Share of employ- ment 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

Country	Top five countries movers	Annual average change in employ- ment in high and medium high tech manufacturing, %
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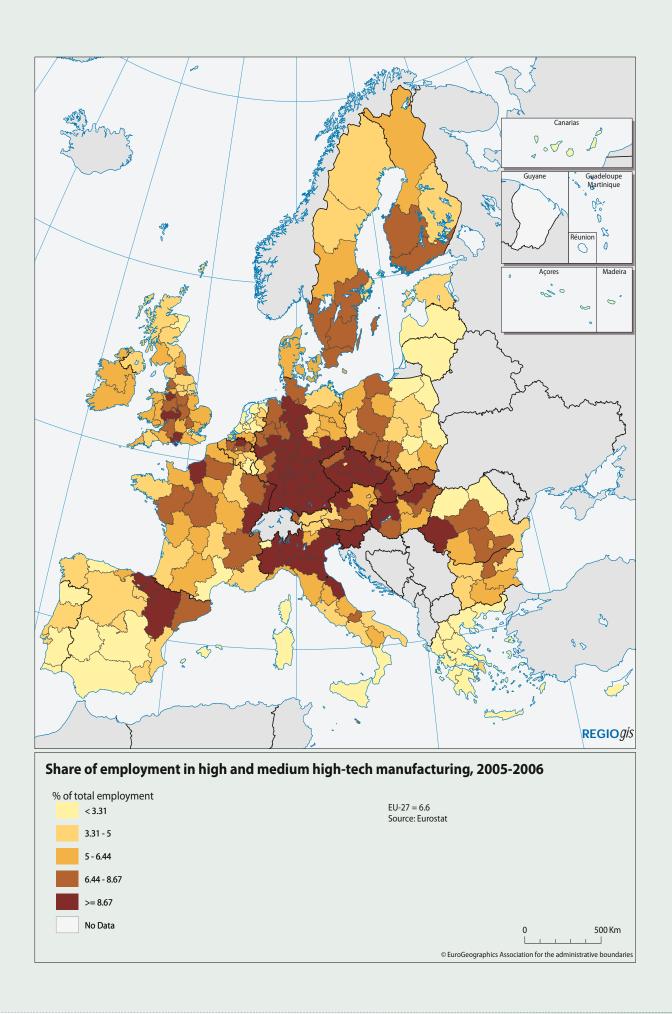
This table shows the five countries in which employment in high and medium high tech manufacturing grew fastest between 2000 and 2005

SK	Slovenská Republika	3.3
CZ	Česká Republika	2.6
EE	Eesti	1.9
LT	Lietuva	1.3
HU	Magyarország	1.2

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.

Due to lack of data at the regional level, growth of the sector is examined at the national level. GVA in high and mediumhigh tech manufacturing has been high in most EU countries, particularly in the new Member States where countries like Lithuania and 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.



#### **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, its 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 EU27 average. The lowest level is 24% in Nord-Est, Romania.

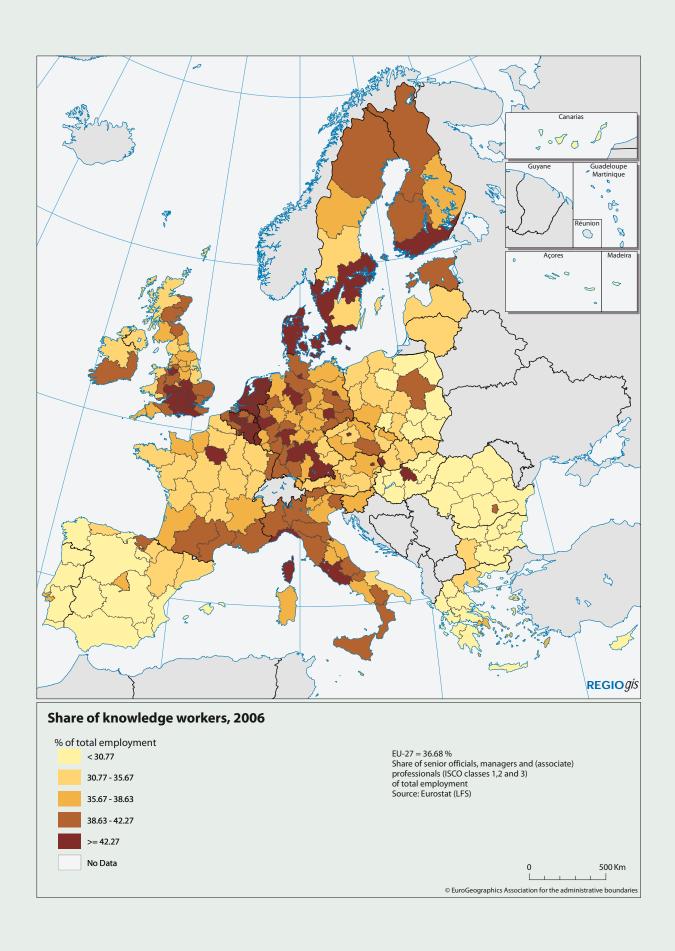
Country	Top ten regions in 2005	GDP/head (PPS), EU27=100
UK	Inner London*	303
LU	Luxembourg (Grand-Duché)*	264
BE	Région de Bruxelles-Capitale / Brussels Hoofdstedelijk Gewest*	241
DE	Hamburg*	202
AT	Wien*	178
FR	Île de France*	173
SE	Stockholm*	172
UK	Berkshire, Buckinghamshire and Oxfordshire	168
DE	Oberbayern	166
NL	Groningen	164

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

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

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 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.



## 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 EU27. Between 2000 and 2006, employment in these categories increased by 3.4 percentage points.

#### How do the EU regions score?

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

Country	Top ten regions movers	Change in the share of knowl- edge workers , percentage points
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This table shows the ten regions where the share of senior officials, managers and professionals increased fastest between 2000 and 2006

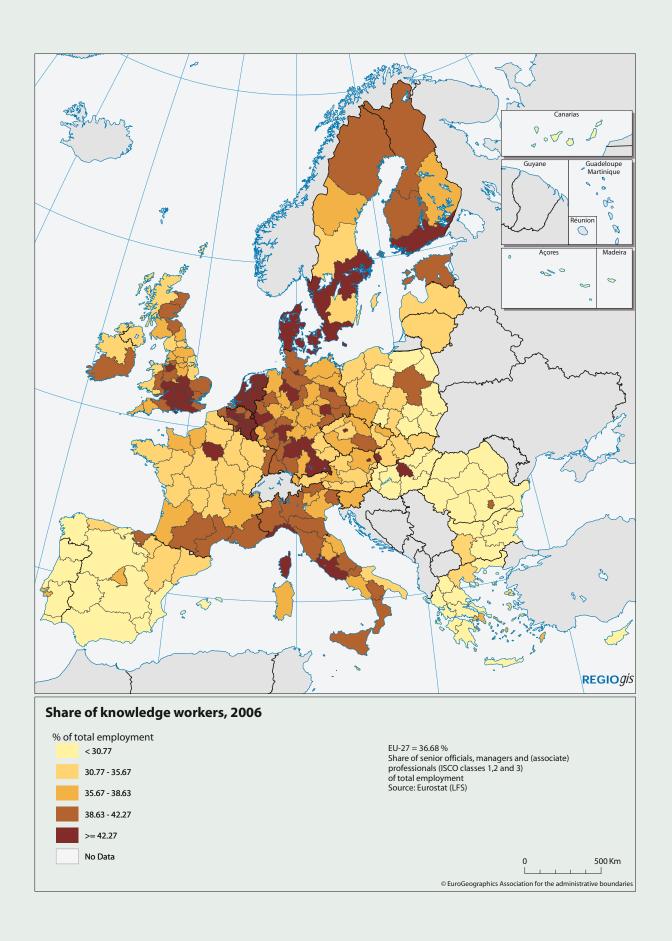
FR	Alsace	9.2
RO	Bucureşti-Ilfov	9.0
GR	Notio Aigaio	8.7
PL	Śląskie	8.7
AT	Steiermark	8.6
PL	Mazowieckie	8.0
PL	Região Autónoma da Madeira	7.7
GR	Kriti	7.7
PT	Algarve	7.5
ES	País Vasco	7.3

The share of knowledge workers differs significantly between European regions. In Praha, more than 60% of jobs fall in such categories wile 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.

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.

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.



## 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?

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

Regional disparities among the EU27 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%.

points	Country	Top ten movers	Change in unemployment rate, percentage points
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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

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.

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.

