European Union
Regional Policy

EN

Growing Regions, growing Europe

Fourth report on economic and social cohesion

PROVISIONAL VERSION

Communication from the Commission

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Chapter 1 — Economic, social and territorial situation and trends in Member States and regions of the EU-27

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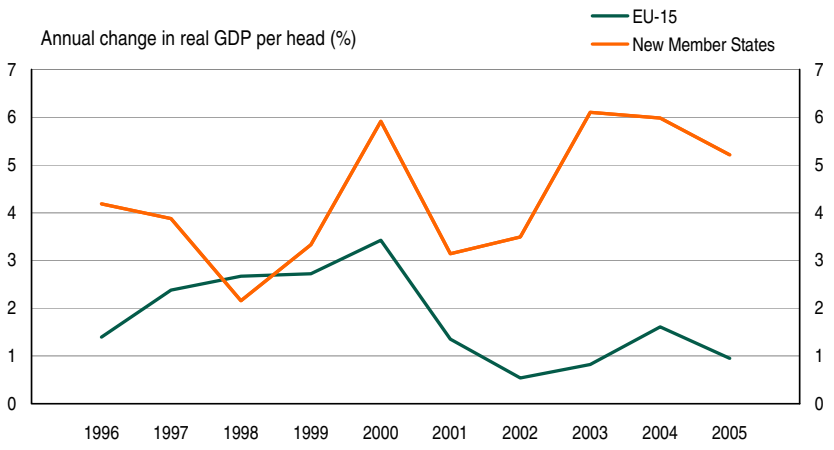
Economic, social and territorial cohesion

Disparities in GDP per head between regions in the EU have narrowed markedly over the past decade as growth in the least prosperous regions has outstripped that elsewhere. This has meant at the same time a lessening of the division in terms of economic potential between the core and the periphery and a corresponding reduction in territorial imbalance. However, although convergence of levels of GDP per head across regions has been accompanied by a narrowing of disparities in rates of employment and unemployment, these remain wide between both different parts of the Union and different areas within regions so posing a threat in some places to social cohesion.

1.1 Growth in real GDP per head in the EU-15 and the new Member States, 1996-2005



Source: Eurostat

The concern here is to document these developments and examine economic and demographic changes across the EU over the recent past at national and regional level and assess their implications for cohesion, not only economic and social but also territorial, in the sense of the balance between and within regions and between different territories. Its primary focus is on the extent to which regional disparities in terms of GDP per head, employment and demographic and territorial trends have changed since the mid-1990s.

GDP trends and convergence at national and regional level

Since the mid-1990s, the European Union (EU-27) has gone through, first, an economic upswing, with growth of real GDP per head[1] reaching almost 4% in 2000, and, secondly, a slowdown with growth of less than 1% in both 2002 and 2003. In 2004 and 2005, there was a modest recovery with growth increasing to 1.9% and 1.3% respectively (Fig. 1.1).

The 2007 EU enlargement

Romania and Bulgaria joined the European Union on 1 January 2007. This enlargement added 8.6% to the Union's landmass and 6.3% to its population — a similar addition to when Austria, Finland and Sweden joined in the mid-1990s — but only 1% to its GDP measured in purchasing power standard terms, less than any previous enlargement. GDP per head is, therefore, only 35% of the EU average in Bulgaria and 38% in Romania. Accordingly, the accession of the two countries lowered the EU average level of GDP per head by just over 4%.

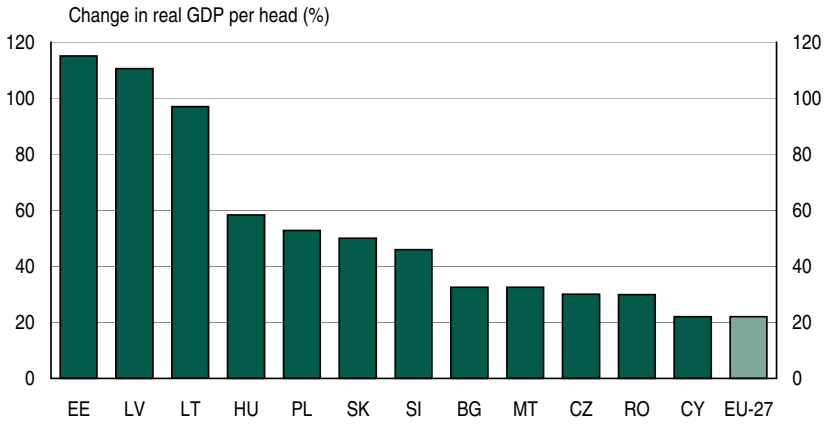
Although GDP growth in both countries has been well above the EU average since 2001 (averaging 5% and 6%, respectively), it would still take another 20 years or so at these rates for their GDP per head to reach 75% of the EU average.

With this enlargement, the Eastern land borders of the EU have grown by 1,300 km. The EU now reaches the Black Sea and completely encircles the Western Balkan. The EU border with Ukraine is now almost twice as long. The EU now shares a 500 km border with Moldova.

1 Calculating economic growth based on changes in GDP per head instead of GDP has the benefit of taking account of changes in the total population. Given the large differences in terms of population growth within the EU-27, GDP per head growth provides a more meaningful picture of economic growth.

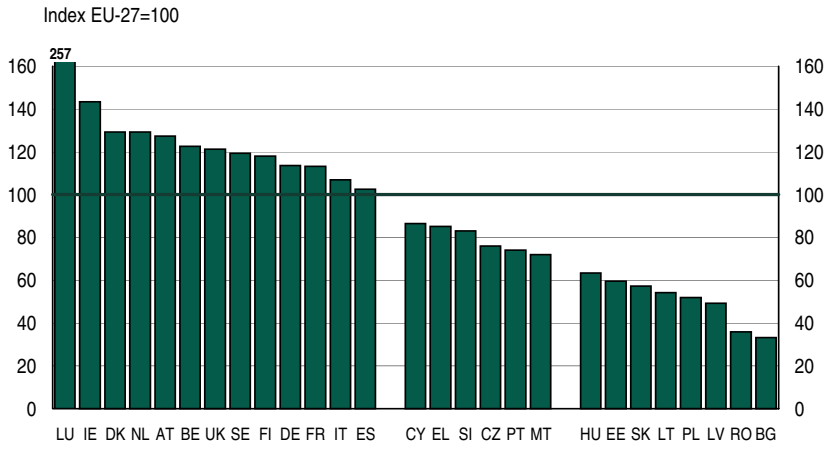
In the 12 new Member States, the 10 which entered the EU in 2004 and the two which did so at the beginning of 2007 (see Box), the story is different. These 12 countries also experienced high GDP per head growth in 2000 of 6%. The subsequent slowdown, however, was both much less severe and less widespread, mainly affecting Poland (where growth fell from over 5% a year to only just over 1% in 2001 and 2002). Growth, therefore, averaged 3.1% in 2001 and rose to 3.4% in 2002. As Poland recovered, growth reached 6% in 2003 and 2004 and remained high with 5% in 2005.

1.2 Total increase in real GDP per head, 1995-2005



Source: Eurostat and DG REGIO calculations

1.3 GDP per head (PPS), 2005



Source: Eurostat

Between 1995 and 2005, growth rates varied markedly between the new Member States, with some countries growing particularly fast. The three Baltic States have doubled their GDP per head in real terms in ten years, with growth averaging 7–8% a year. In contrast, Bulgaria and Romania saw their economies contract in the second half of the 1990s, but since 2000, they have both grown by an average 6% a year.

Countries with a very low GDP per head are catching up faster …

In the 10 years from 1995 to 2005, GDP per head growth in all the new Member States, with the exception of Cyprus, exceeded the average rate in the EU-27 (Fig. 1.2). Since 2000, growth has been highest in the countries with the lowest level of GDP per head in terms of purchasing power standards (PPS). In the eight new Member States with the lowest levels of GDP per head (grouped on the right in Fig. 1.3), growth between 2000 and 2005 was 5 percentage points above the EU-27 average of 1.4%. In Poland, however, growth was not as high, averaging only 3% a year as compared to rates of between 5% and 9% in the seven other countries.

In the four new Member States with the highest levels of GDP per head — Cyprus, Slovenia Czech Republic and Malta — growth was less strong but still, on average, between 0.6 and 1.8 percentage points above the EU-27 average in Slovenia, Czech

GDP performance: comparison with key competitors

GDP per head in PPS terms in the US in 2004 was 60% higher than the EU-27 average, and 43% above the EU-15 average. Only two Member States, Ireland and Luxemburg, had levels above that of the US. In Japan, GDP per head in the same year exceeded the EU-27 average by 19%, though in this case, six Member States had a level above this and in five it was only slightly below. Between 1995 and 2005, GDP per head in the EU grew at virtually the same level as in the US (2% as against 2.1%) and twice as fast as in Japan.

Regional disparities in GDP per head are far more extreme in the EU-27 than in the US or Japan, especially after the two recent enlargements. In the EU, the GDP per head in the region where this is highest is 8 times greater than in the region where it is lowest. In the US, the difference is only 2.5 times and in Japan just two times. All US states have a GDP per head that is above the EU average. In Japan, 40 of the 47 regions do. Clearly, the challenge of reducing regional disparities and ensuring economic and social cohesion across the EU is far greater than in the US or Japan.

The variation in rates of GDP per head growth across regions in the EU is also much greater than in the US. Over the period 1997–2004, growth at regional level in the EU varied from below zero to over 8.6%, while in the US it varied from zero to 3.6%. This wider variation in growth rates, however, is in some degree a positive feature given the much greater need for low income regions to catch up (Map 1.1).

In China, GDP per head, again in PPS terms, is only one-fifth of the EU average, while in India, it is one-eighth. In Romania and Bulgaria, which have the lowest GDP per head in the EU, the level is still over twice as high as in India and 50% higher than in China. These two countries, however, are catching up rapidly with the EU. Growth of GDP per head in India has been double that in the EU over the past decade and the growth rate in China was three times the one in the EU. Nevertheless, even if such high growth rates can be sustained, it would take over 40 years for GDP per head in China to come close to the current level in the EU.

Despite the vast difference in GDP per head, the size of regional disparities in India and China are similar to that in the EU. The region with the highest GDP per head in both China and India has a level seven times greater than in the lowest regions against eight times in the EU. Differences in regional GDP growth rates in India between 2000 and 2004 were very similar to those in the EU, varying between 1% and 13% while, in China, they varied by much less — by between 6% and 11%.

Republic and Malta, while in Cyprus growth was just below the EU average.

… The four (former) cohesion countries continue to reduce the gap

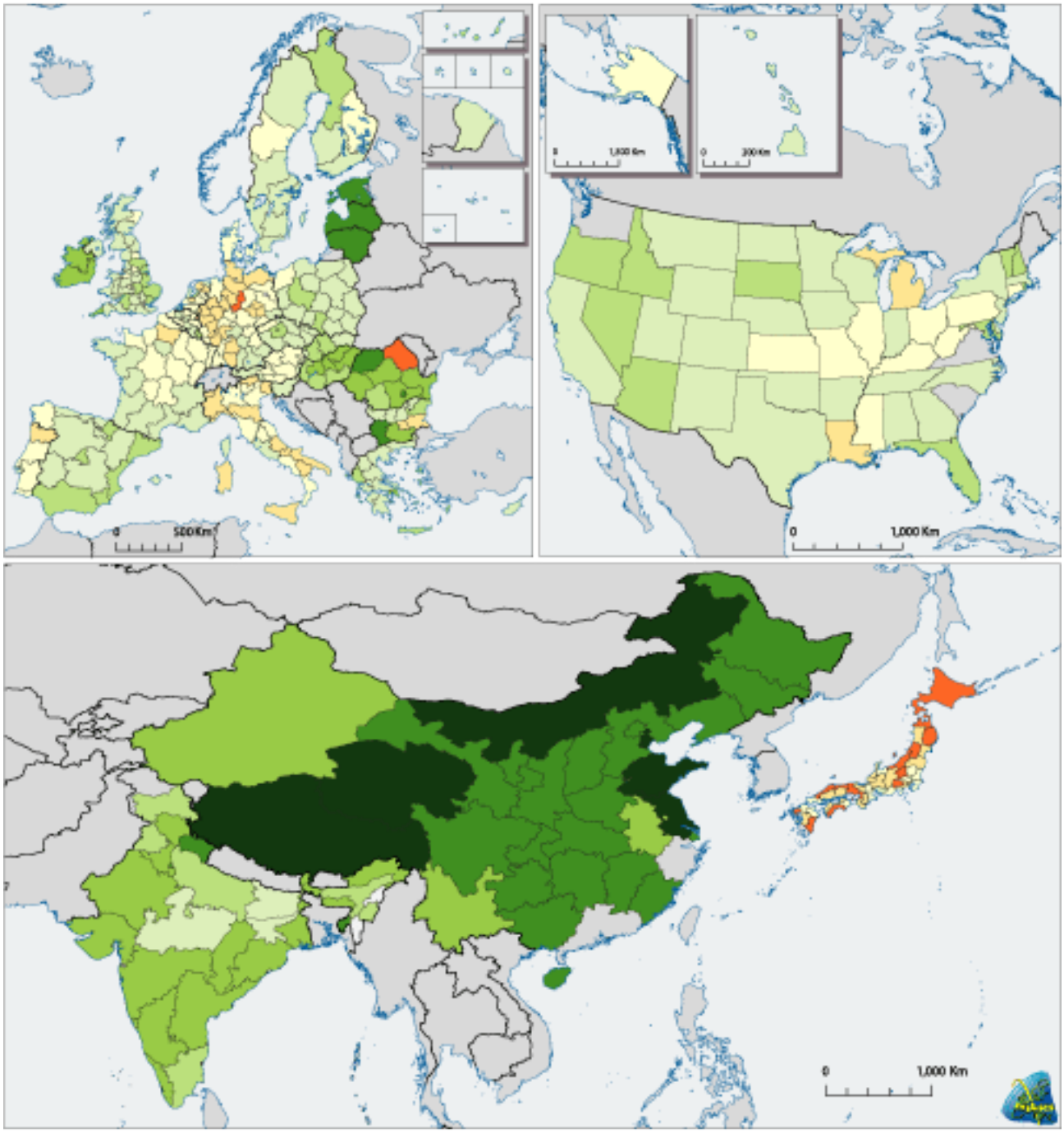
The performance of Greece, Spain, Ireland and Portugal was uneven between 1995 and 2005. In all but Portugal annual economic growth consistently exceeded the EU average (Fig. 1.4).

Since 1995 Ireland has consistently grown much faster than the EU-15. Between 1995 and 2005, its annual average growth of GDP per head was 4 percentage points above the EU average. As a result, in 2005 Ireland had the second highest GDP per head in the EU in PPS terms.

In Spain, growth of GDP per head was on average 0.7 percentage points a year higher than the EU average over these 10 years. As a consequence, GDP per head in PPS terms in 2005 was slightly above the EU-27 average.

In Greece, growth has been stronger, averaging 1.5 percentage points above the EU average between 1995 and 2005, increasing GDP per head to 85% of the EU average in 2005.

In Portugal, growth was above the EU average up until 1999, but since then it has been well below the rate in the rest of the EU, with little sign of any recovery. GDP per head in PPS terms in 2005 was, accordingly, only 74% of the EU average, below the level in the Czech Republic and Slovenia.



1.1 Growth of GDP, 1999-2004 (EU, USA, India, China and Japan)

Annual average % change

< 0	3.5 - 5
0 - 1	5 - 7
1 - 2	7 - 9
2 - 3.5	>= 9
	No Data

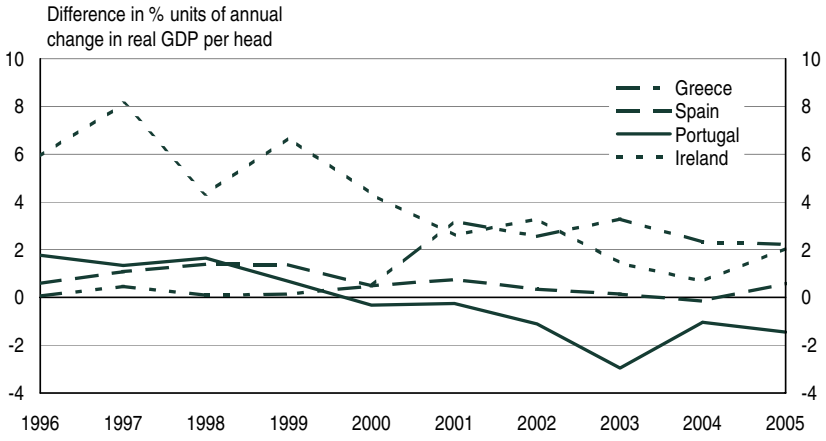
* Japan: 1999-2003;

Sources: Eurostat (EU), BEA (USA), NSI (China, India, Japan), DG REGIO

Administrative boundaries: Europe: © EuroGeographics Association; other continents: FAO

The boundaries shown on this map do not imply official endorsement or acceptance by the European Commission.

1.4 Difference between growth in real GDP per head in the Cohesion countries in the EU-15 and the EU-15 average, 1996-2005



Source: Eurostat

At regional level the situation is improving …

Comparing the top 20% of NUTS2 regions in the EU-27 with the bottom 20% in terms of GDP per head between 1995 and 2004, clearly demonstrates the reduction in disparities which occurred over the period, the ratio of the average level in the top regions to that in the bottom declining from 4.1 to 3.4.

In 1995, 78 of the 268 NUTS 2 regions which at present make up the EU-27 had a GDP per head below 75% of the EU-27 average (from here on called 'lagging' regions). Of these 78 regions, 51 were in the new Member States and 27 in the rest of the Union. Of the 51 regions in the new Member States, 39 had a GDP per head below 50% of EU average. Only four regions in the new Member States had a level of GDP per head above 75% of the EU average: Praha, Bratislavský, Cyprus and Malta.

Lagging regions are catching up …

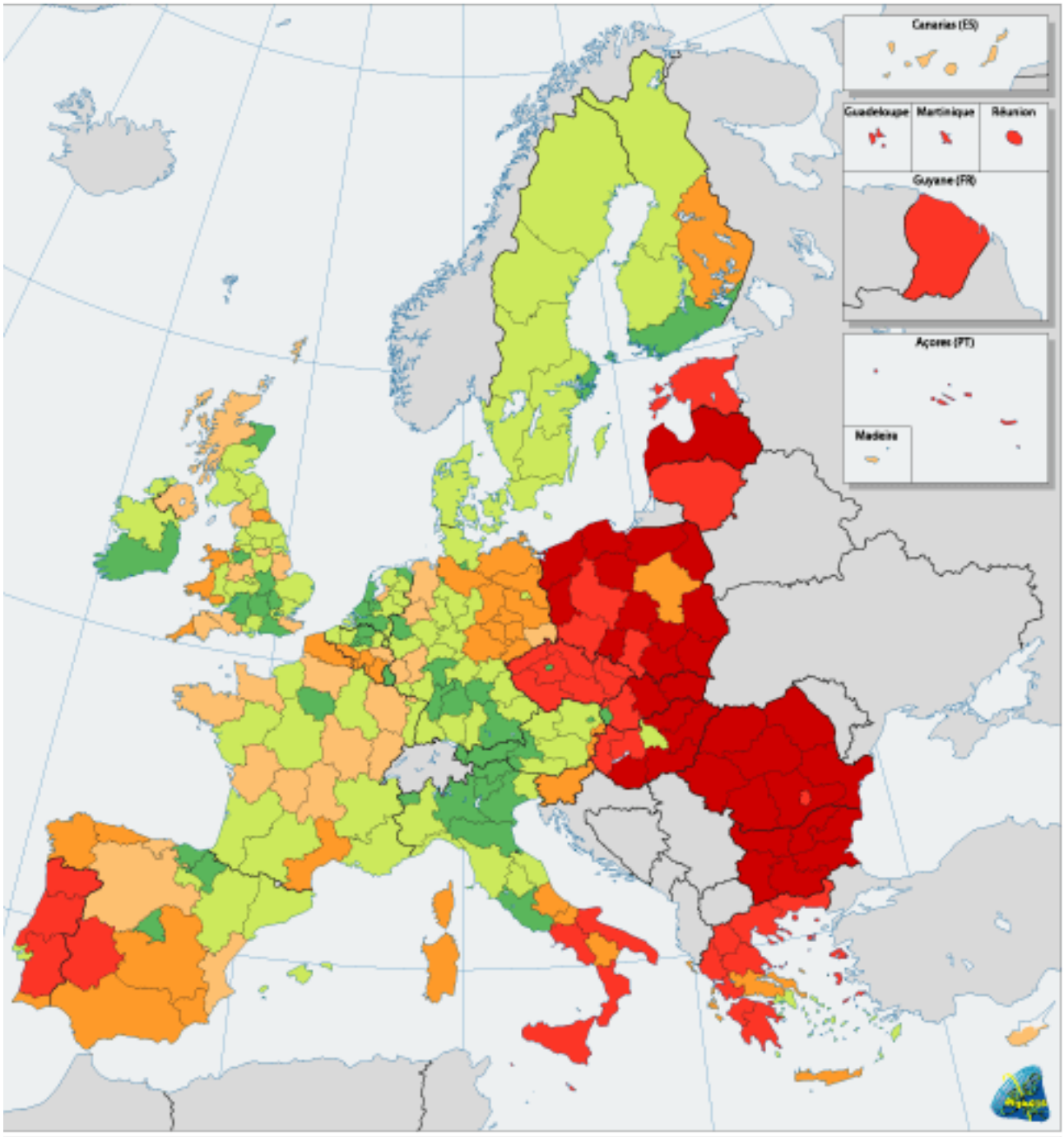
By 2004, the situation had improved significantly, with only 70 lagging regions, 49 in the new Member States and just 21 in the rest of the Union. The three regions in the new Member States in which GDP per head had risen above 75% of the EU average were Slovenia and two regions which include the national capital, Mazowieckie in Poland and Közép-Magyarország in Hungary. The fact that there were not more, despite relatively high growth in these countries over the period, emphasises the low level of GDP per head from which they were starting. At the same time, the number of regions with GDP per head of less than 50% of the EU average fell from 39 to 32. Malta's GDP per head just dipped under 75% of the EU average in 2004 (Map 1.2).

In the rest of the EU, three regions, Campania, Puglia and Sicilia, in Italy, saw GDP per head fall below 75% of the EU average, while in nine it rose above this level — two regions in Greece, four in Spain, Cornwall in the UK, Dessau in Germany and Southern and Eastern Ireland which includes Dublin. All nine of these regions are long-term recipients of Structural Fund support with Objective 1 status. As the population of the three Italian regions is almost the same as the population of the nine regions in which GDP per head rose above 75% of the EU average, the to-

The lagging regions in the EU-15

The lagging regions in the EU-15 (defined in relation to the EU-15 average GDP per head), which were major recipients of support from the Structural and Cohesion Funds, showed a significant increase in GDP per head relative to the rest of the EU between 1995 and 2004. In 1995, 50 regions with a total of 71 million inhabitants had a GDP per head below 75% of the EU-15 average. In 2004, in 12 of these regions with population of almost 10 million and spread across the EU (in Germany, Greece, Spain, France, Ireland, Portugal, Austria and the UK), GDP per head had risen above the 75% threshold.

On the other hand, in five regions, GDP per head slipped below 75% of the EU average over the period, three Southern Italian regions, Hainaut in Belgium and Lüneburg in Germany, which together had a population of around 6 million.



1.2 GDP per head (PPS), 2004

Index, EU-27 = 100

- < 50
- 50 - 75
- 75 - 90
- 90 - 100
- 100 - 125
- >= 125
- no data

Source: Eurostat

0 500 Km

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1.1 Regions with GDP per head <75% below of EU average, 1995 and 2004

	EU-15		NMS12		EU-27	
	1995	2004	1995	2004	1995	2004
Number of regions	213		55		268	
Total population (million)	372	386	106	104	479	490
GDP per head <75% of EU average						
Regions						
Number	27	21	51	49	78	70
%	13	10	93	89	29	26
Population						
Number (million)	32	32	103	91	136	123
%	9	8	97	88	28	25

Source: Eurostat

tal population living in lagging regions in the EU-15 barely changed (Table 1.1 and Box).

… And regions with a GDP per head below 50% of the EU-27 average are catching up faster …

At the national level, as indicated above, Member States with a low level of GDP per head have tended to grow faster than other countries over recent years, implying a marked catching up. This was also the case at the regional level.

Between 1995 and 2000, growth of GDP per head in the regions where this was below 50% of the EU average was, in aggregate, less than in the rest of the EU. However, this was largely due to economic contraction in Romania and Bulgaria affecting all 14 regions there. In the 19 remaining regions, growth averaged just over 4% a year, well above the EU-27 average of just under 3%. Between 2000 and 2004, average growth in regions with GDP per head below 50% (this time including the Bulgarian and Romanian regions) was only slightly less than in the earlier period at almost 4% at year, though this was much above the EU average of 1.6% (Fig. 1.5).

In regions with a GDP per head of between 50% and 75% of the EU-27 average, growth over the period was also higher than in other regions, if to a lesser extent (only 0.1% above the EU average before 2000 and 0.3% after).

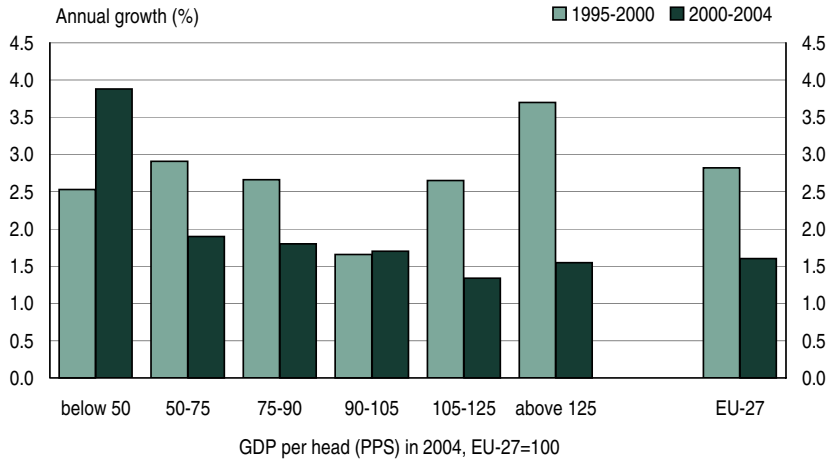
… While some of the higher income regions are facing problems

Some of the regions with GDP per head above 75% of the EU average experienced very low or even negative growth rates between 1995 and 2004. In five regions — Guyane, Champagne-Ardenne and Poitou-Charentes in France, Berlin in Germany and Valle d'Aosta in Italy — GDP per head declined in real terms over these nine years. In twelve others, growth was under 0.5% a year. In the four years, 2000–2004, moreover, GDP per head fell in 27 regions and in a further 24, growth was under 0.5% a year (Fig. 1.6).

Convergence is therefore occurring at the EU level …

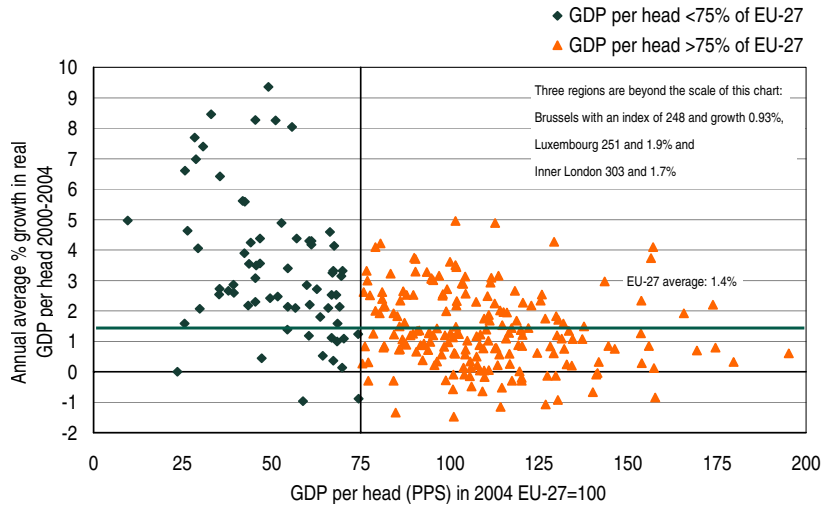
Over the period 1995–2004, therefore, disparities in GDP per head between NUTS 2 regions narrowed across the EU, most of the reduction occurring in the last four years. This is confirmed by a number of statistical measures (including the Gini coefficient and weighted coef-

1.5 Growth in real GDP per head in EU regions, 1995-2004



Source: Eurostat and DG REGIO calculations

1.6 Growth of GDP per head 2000-2004 and GDP per head 2004



Source: Eurostat

ficient of variation), most visibly by the narrowing of the gap in GDP per head between the most and the least prosperous regions.

As part of this convergence, there was also a reduction in the gap between the core regions in the central part of the EU (the so-called Pentagon stretching from London across to Hamburg, down to Munich, across to Milan and up to Paris) and other parts of the EU, so contributing to territorial cohesion. The peripheral, regions, broadly defined, therefore, performed better in terms of growth over this period than the traditional economic hub of the EU.

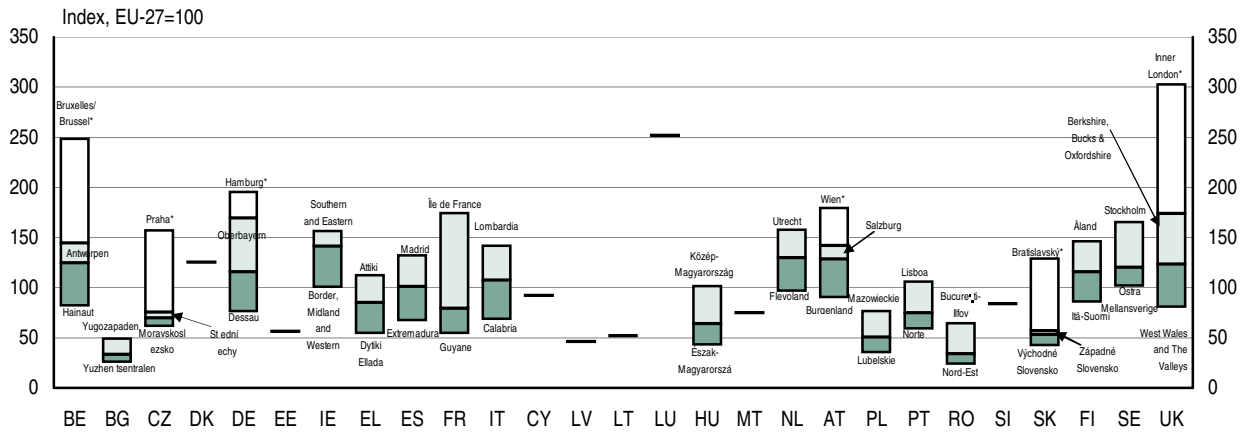
This stronger growth performance, however, does not extend to all the peripheral regions, just as the relatively weak performance does not apply to all core regions. In other words, things are more complicated than a simple comparison between the core and the periphery might suggest. Some regions seem to have overcome handicaps stemming from their peripherality, at least during this period, others not.

But not in most cases at the national level…

It is equally instructive to examine what has been happening to regional disparities within countries over recent years, since much of the regional convergence which has occurred at EU level is a consequence of convergence of low income countries rather than of low income regions as such. For cohesion in all three dimensions — economic, social and territorial — to be strengthened, it is as important that regional disparities narrow within countries as over the EU as a whole (Fig. 1.7).

In practice, convergence of GDP per head at regional level has occurred in some Member States over re-

1.7 GDP per head (PPS) in Member State and regional extremes, 2004



** In these regions, the GDP per head figure tends to be overestimated because of commuter flows.*
Source: Eurostat

cent years but divergence in others. In Austria disparities in GDP per head between regions narrowed over the period 1995–2004. In Germany, France, Greece, Spain and Italy, however, there was little change, and this was also the case in Belgium and Finland. In the UK, Sweden, the Netherlands and Portugal disparities widened between the 1995 and 2004, most of this divergence occurred between 1995 and 2000, with very mild divergence between 2000 and 2004 in the UK and Portugal, while in Sweden and the Netherlands regions converged moderately over this period.

In Poland and Hungary, there was also a widening of regional disparities between 1995 and 2000, but on a much larger-scale than in the UK, and little change from then to 2004. In the Czech Republic as well as in Romania and Bulgaria, disparities widened markedly throughout the period, while in Slovakia, there was some widening but on a much smaller scale.

Divergence within countries reflects growth of capital cities …

Taking a more territorial approach reveals that in all of these countries, especially in the new Member States, a large part of the divergence in regional prosperity was a result of high concentration of economic activity and growth in and around the capital city. Moreover, even in the countries in which disparities remained much the same or where they narrowed, GDP per head in the capital city region grew faster than in other parts of the country.

Between 1995 and 2004, all capital city regions, with the exception of Berlin increased or at least maintained their share of national GDP. The increase was particularly marked in Warsaw, Prague, Budapest, Sofia and Bucharest.

The relative growth of capital city regions is strongly related to their attraction as locations for business as well as for individuals. This tends to lead to unbalanced territorial development within countries unless there are other centres of economic activity, in particular other large cities or conurbations — or even networks of smaller cities and towns to provide the same kind of attraction (see Box).

The impact of commuting on GDP per head

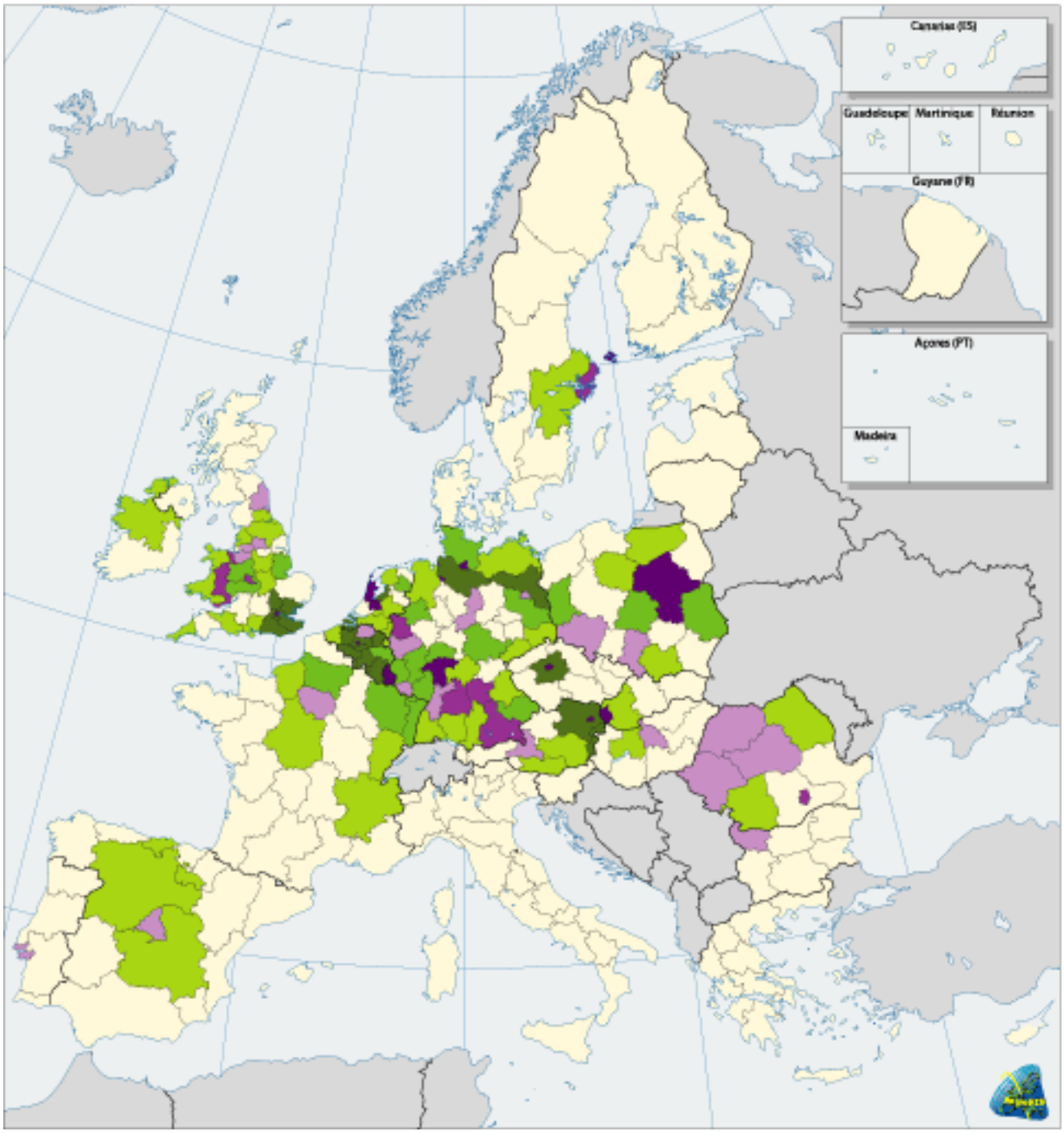
Gross domestic product per head measures the economic wealth created in an area per inhabitant of that area. This indicator is most relevant when the people who create this wealth live in the area. For large countries this is usually the case, there may be some cross border commuting, but it usually does not significantly alter the GDP per head level. For small countries, such as Luxembourg for example, GDP per head will overestimate the average GDP created per inhabitant if many people commute into the country and few of the country's residents work outside the country. This effect is, of course, much stronger at the regional level. For example, in Brussels almost one in every two people working in the region lives outside. As a result, GDP per head is almost double the level it would be if those contributing to Brussels' GDP and their dependents were included in the Brussels population. In a few rare cases, a region may have a substantial proportion of its residents working outside the region, with few commuting into the region, as a result GDP per head underestimates the economic wealth per inhabitant.

This effect of commuting is most pronounced in densely populated urban areas. Most capitals fall into this category; their GDP is overstated relative to that produced by residents by between 4% and 76%. In eight capital cities, GDP per head is inflated by more than 10%. However, this has not had a significant impact on the allocation of structural funding (Map 1.3).

Balanced territorial development is aided by secondary growth poles

The concentration of economic activity in capital cities brings benefits in the form, for example, of economies of scale or agglomeration and a large size of market. But it also involves costs, in the form of congestion, poorer air quality and high property prices[2]. More balanced development tends to reduce these costs and, by spreading demand more evenly, to facilitate faster economic growth in the country as a whole.

2 The Urban Audit Perception Survey conducted in 75 cities in the EU-27, Croatia and Turkey in November 2006 found that in virtually all capital cities good quality, affordable housing was perceived to be much less available than in other cities in the country.



1.3 GDP per head (PPS) adjusted for effects of commuting (estimate), 2003

Difference compared to original value, Index EU-27 = 100

- < -10
- -10 - -6
- -6 - -2
- -2 - 2
- 2 - 6
- 6 - 10
- >= 10

Sources: Eurostat, census results, estimates DG REGIO

0 500 Km

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Concentration of economic activity in capital cities

In 2004, capital city regions[a] produced on average 32% of the GDP in the country where they were situated, while they accounted for just 22% of population. All capital city regions with the exception of Berlin have a higher GDP per head than the national average and in fourteen it is between 40% and 100% higher. This is due to the relative concentration of economic activity in these regions and their higher productivity levels. On average, productivity levels in capital city regions was 25% higher than the national level; Berlin was the only capital with a productivity level below the national level. Capital city regions, therefore, tend to act as growth poles, attracting business investment from outside through the range of services and amenities they have to offer as well as the large market they represent.

Between 1995 and 2004, capital city regions increased their economic position within the country; on average their share of national GDP increased by 9% while the population only increased by 2%. Only Berlin and Dublin saw their share of national GDP decline (by 10% and 3%, respectively).

[a] Capital city regions are included for all Memeber States with the exception of Malta, Cyprus and Luxembourg. They are based on a NUTS3 region or groups of NUTS3 regions and approximate a commuter shed area.

In only three countries in Europe, however, do secondary growth poles seem to be effective in counterbalancing the economic power of the capital city (see Box). In Spain, the Barcelona region (defined at NUTS 3 level) was responsible for generating 14% of Spanish GDP, while Madrid generated 18% with a similar population. Madrid, however, attracted a larger share of population growth and of economic growth than Barcelona. Barcelona saw its GDP per capita decline in relation to that of Madrid between 1995 and 2004. In Italy, Milan was responsible for 10% of national GDP, similar to Rome. Naples in the south, however, accounts for a much smaller share of GDP with little sign of the gap being closed despite the slightly faster growth in recent years in the southern regions than in the northern ones. In Germany, there are multiple growth poles, the four largest city regions together with Berlin each accounting for around 5% of national GDP and three out of four (Munich, Frankfurt am Main and Hamburg) grew faster than Berlin over the period.

In other countries, the capital city region tends to dominate. In France and the UK, Paris and London account for around 30% of national GDP, while other cities account for no more than 3–4%. In France, GDP per head in the Lyon region is above the national average and closest to that of Paris, though this is not the case in Lille or Marseille. In the UK, GDP per head in Birmingham, Manchester and Glasgow is no higher than the national average and growth has been slower than in London. In Poland, despite relatively large concentrations of population in Lódz, Kraków and Wrocław, economic activity is heavily concentrated in the Warsaw region (which accounts for 16% of Polish GDP but only 7% of population) and growth between 1995 and 2004 was much higher than in these other cities.

In the rest of the EU, though there are examples of GDP growing faster in large non-capital cities than in the country as a whole, their share of national GDP fell by 1 percentage point between 1995 and 2004. In most cases, GDP per head remains around or below the national average. Only in Germany and Italy are there second cities with GDP per head higher than in the capital.

Continuing effort is needed to reduce disparities at EU level further

Irrespective of what has happened within countries, the gap in levels of prosperity across the EU remains wide. In 2005, in three of the new Member States (Cyprus, Slovenia and the Czech Republic) GDP per head had risen to above 75% of the EU-27 average. If recent trends in relative growth rates continue, projections suggest that by 2016 six more of the countries might reach this level — the three Baltic States, Hungary, Malta and Slovakia. Poland and, most especially, Bulgaria and Romania, could take considerably longer to do so (Fig. 1.8).

Even if, however, economic growth in the new Member States can be sustained at a rate well above that in the rest of the EU and these projections are re-

alised, in many regions in these countries GDP per head will still be well below 75% of the EU average unless regional disparities narrow markedly. In the Czech Republic, for example, in three of the eight regions GDP per head was around 60% of the EU average in 2004. Many regions will, therefore, take far longer to reach the 75% level than the country in which they are situated, even given the maintenance of relatively high rates of growth. Cohesion policy, accordingly, remains essential for supporting the development of regions, particularly, in the new Member States if regional disparities are to be reduced to a more acceptable level within a reasonable period.

Productivity and employment growth

The level of GDP per head in any country or region can be approximately attributed to two broad factors. One is the output produced by each of the people in work, or their level of productivity. The other is the proportion of the population in work. The same goes for changes over time. For GDP per head to increase, therefore, either productivity has to go up or the proportion of people in employment has to rise. Both are important. Although the emphasis tends to be on increasing productivity as the means of expanding income levels over time, in part because of its link to competitiveness — though this link is not necessarily very close because of the growing importance of non-price factors — raising employment can contribute at least as much to growth in economies where levels are low. Moreover, low levels of employment and, correspondingly, large numbers out of work also have implications for social cohesion.

The challenge is to combine high productivity with high levels of employment — to avoid sacrificing one for the other — and to do so throughout a country or region so as to maintain territorial cohesion. This challenge is particularly acute, as shown below, in the new Member States, where productivity is still much lower than in most other parts of the EU, despite high rates of growth since the mid-1990s, but where equally in many places employment is also low. But a similar challenge, if perhaps less acute, also confronts other parts of the EU.

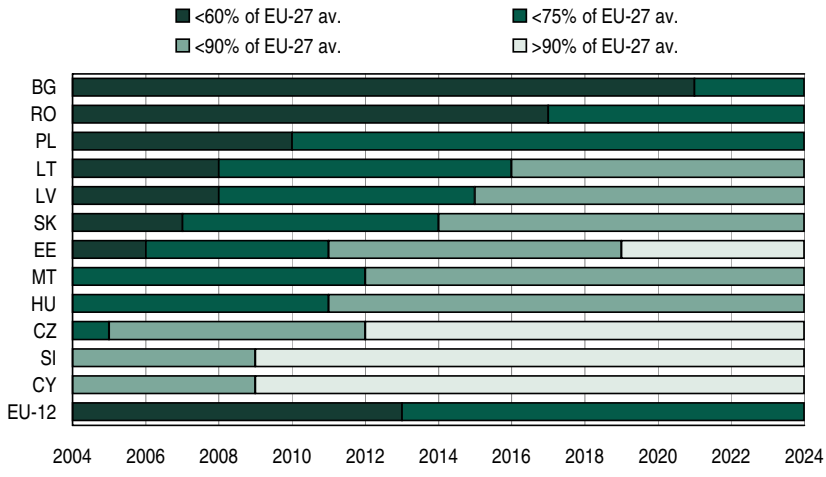
Productivity

Productivity trends at international level — growth in the EU falling behind the US

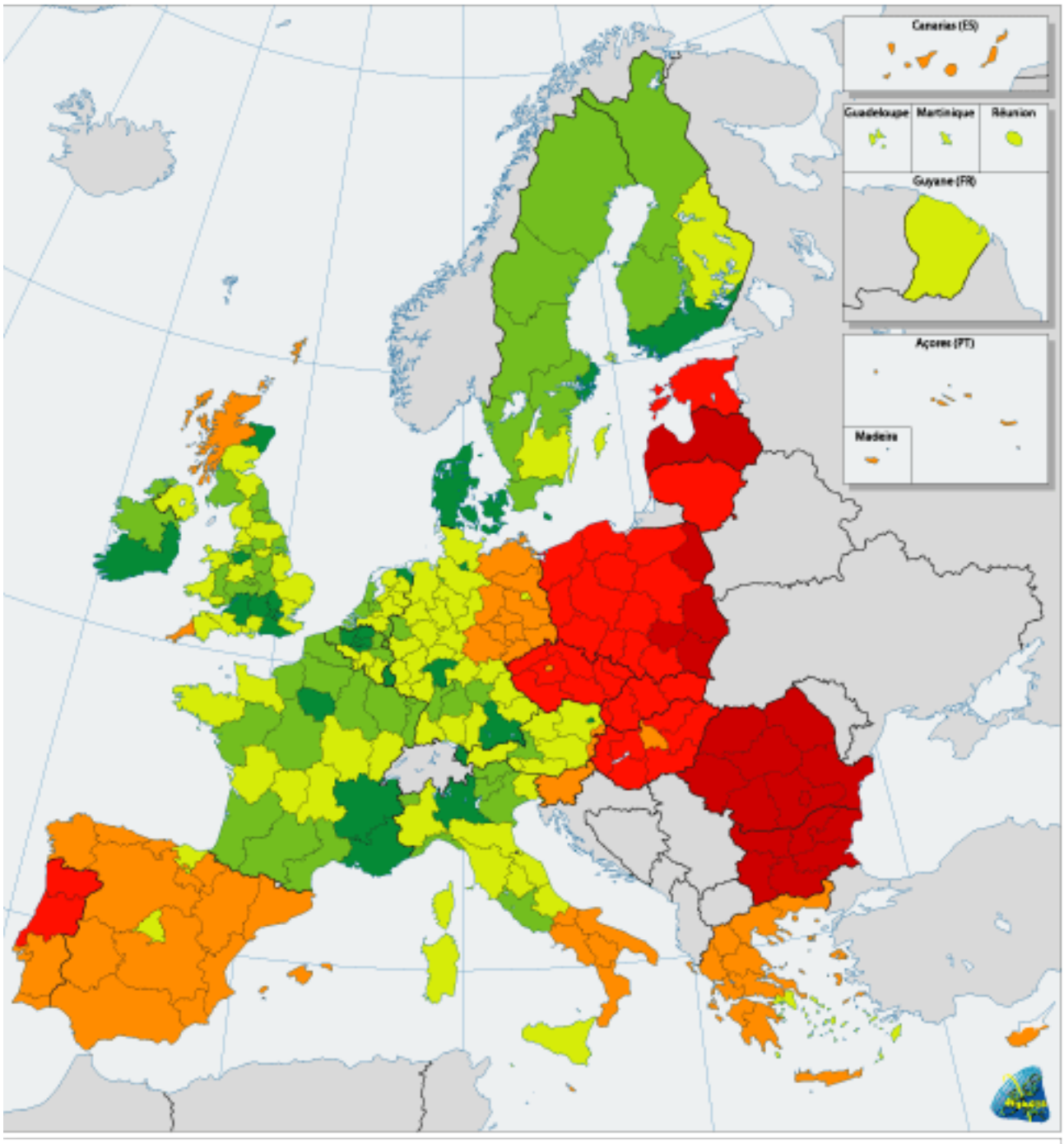
Between 1980 and 1995, productivity growth as measured by GDP per person employed was considerably higher in the EU-15, than in the US. Since then, however, growth in productivity in the EU-15 as lagged behind that of the US (Fig. 1.9). Whereas, GDP per person employed was only marginally lower than in the US in 1995 (3% lower), by 2005, the gap had become significant (12% lower).

Much of this gap can be attributed to the longer hours which Americans tend to work, mainly because of having much shorter holidays. If differences in average working time are explicitly allowed for and productivity is measured in terms of GDP per hour worked, the gap all but disappears. In 2004, therefore, productivity in these terms was almost identical in the EU-15 to that in the US, though the growth of productivity remains higher in the US than the EU-15

1.8 Projection of GDP per head (PPS) in the new Member States, 2004-2024



Source: Eurostat and DG REGIO calculations



1.4 GDP per person employed (EUR), 2004

Index, EU-27 = 100

- < 25
- 25 - 50
- 50 - 100
- 100 - 120
- 120 - 130
- >= 130
- no data

IE: 2003
UK: 2001

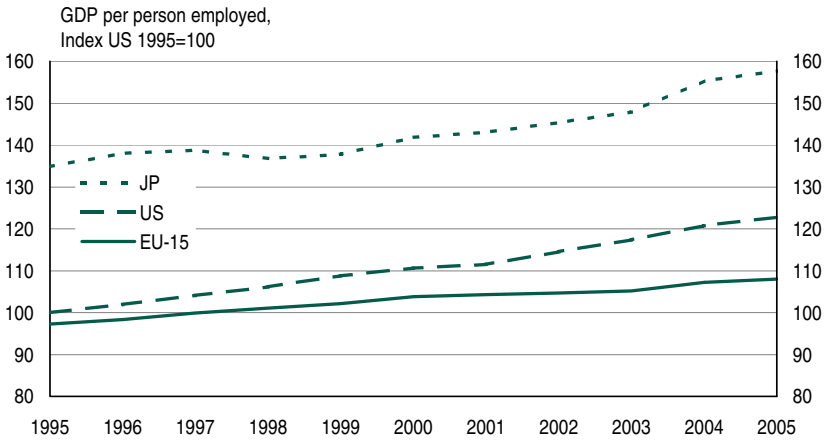
Sources: Eurostat, NSI, DG REGIO

0 500 Km

even after allowing for changes in working time.

GDP per hour worked was higher in nine Member States than in the US. By contrast, it was substantially lower in Greece, Cyprus and Portugal (54%, 53% and 45% of the US level, respectively) and even lower in the 11 remaining new Member States, where it was between 8% and 45% of the US level. Over the period 1995–2004, only in Ireland, Greece and Sweden among the EU-15 countries (no data for hours worked are available for the new Member States before 2000) was productivity growth higher than in the US, though it was similar in Finland, Portugal and the UK.

1.9 Productivity growth in the US, EU-15 and Japan, 1995-2005



Source: Eurostat

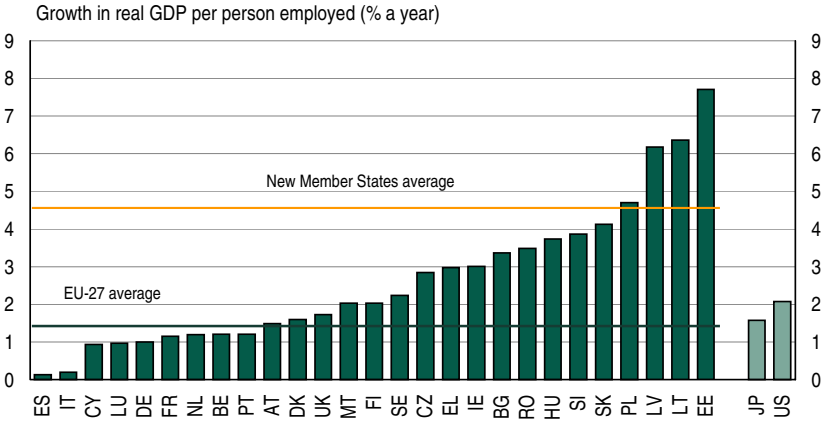
On the evidence of the growth in GDP per person employed, it was almost certainly higher as well in all the new Member States, apart from Cyprus and Malta. In these terms, productivity growth in the new Member States averaged 4.5% a year over the period 1995–2005, four times higher than for the EU-15 (Fig. 1.10). In Estonia, it was close to 8% a year and in Latvia and Lithuania, 6–7% a year, though in the Czech Republic, it averaged under 3% a year, less than in Greece and Ireland. At the other extreme, GDP per person employed increased by just 1% a year in Germany and by only marginally above zero in Spain and Italy.

Regional EU disparities in productivity …

Productivity, measured in GDP per person employed, varies markedly across the EU, underlying the disparities in GDP per head noted above. It is highest in Northern and Western European regions in which capital cities or large conurbations are situated and lowest in most in the new Member States. In most regions in Spain, Greece and Portugal (the Cohesion countries), it is much closer to the EU average, though still below (Map 1.4). Regional disparities in productivity are also significant within Member States, contributing to the differences in GDP per head (Fig. 1.11).

In terms of GDP per hour worked, which is a more accurate measure, regional disparities in productivity tend to be wider since average working time of those in employment is generally longer in the lagging regions

1.10 Productivity growth in Member States, 1995-2005



BG 1996-2005
Source: Eurostat

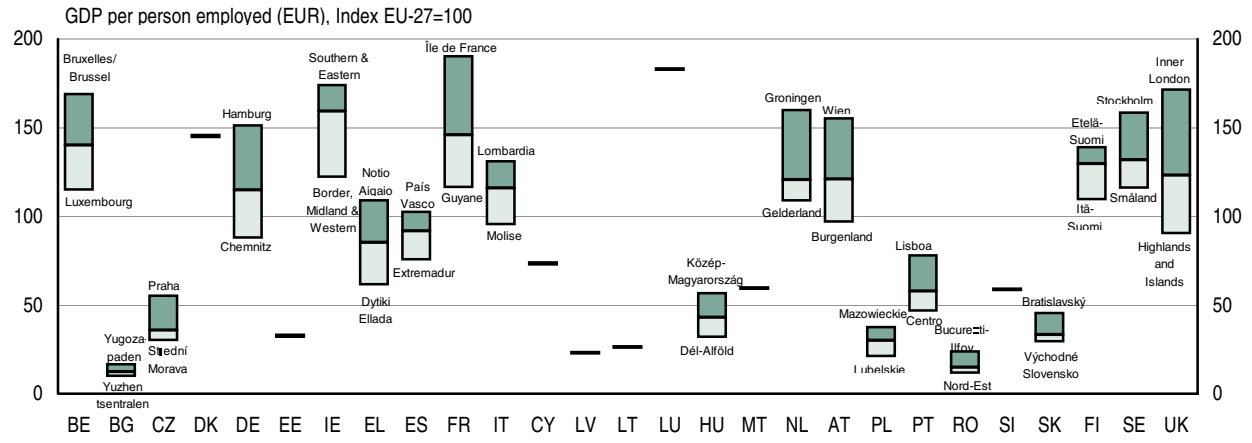
than in the higher income parts of the EU. The highest levels of productivity are even more overwhelmingly in the regions which include the capital city in the Northern and Western parts of the EU (7 of the top 15 regions), the highest level (in Luxembourg) being some 20 times higher than in most regions in Bulgaria and some in Romania. Nine out of ten lagging regions have productivity levels below 75% of the EU average, with most of those in the new Member States having levels substantially below the average, in many cases, significantly lower than in most Greek, Portuguese, Spanish and southern Italian regions.

At the same time, there is evidence of a marked catching up over recent years, especially in regions — in the new Member States, in particular — where productivity levels are lowest (Map 1.5). Between 1995 and 2004, therefore, labour productivity, measured in terms of GDP per person employed, grew by 6.5% a year in the three Baltic States and in parts of Poland, while in most of the more developed regions, it rose by less than 2% a year, in some cases, much less. Almost all the regions experiencing the highest rates of productivity growth were in the new Member States — 27 of the 31 in which the growth rate was more than 4% a year (the only exceptions were three Greek regions and Madeira) — a result of the significant restructuring which is occurring there together with the considerable scope for catching up with levels elsewhere.

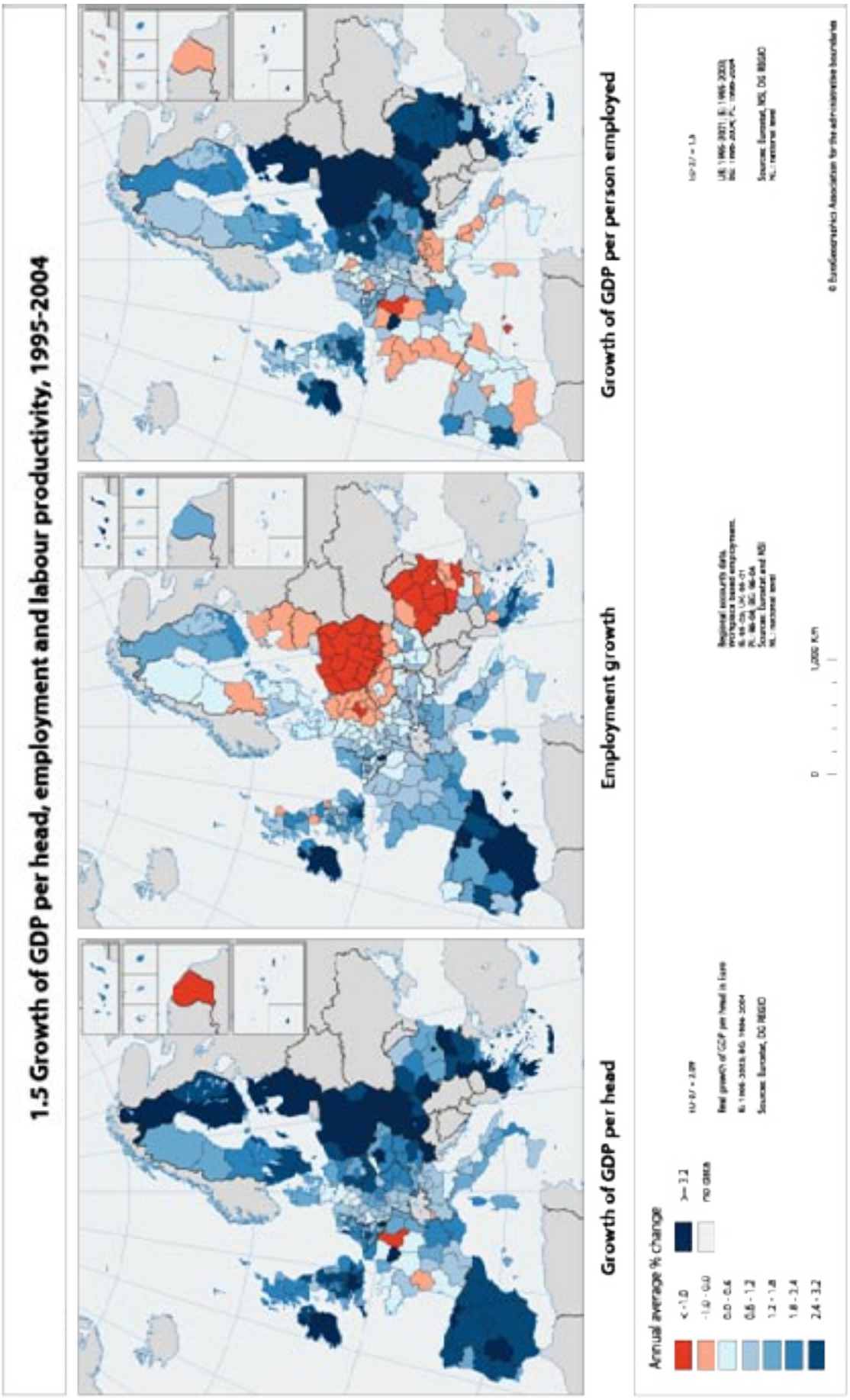
On the other hand, only one lagging region (Guyane) was among the 30 regions in which GDP per person employed declined over this period. The other 29 regions were in Italy, France, Spain and Germany. In some cases, the regions concerned have among the highest levels of GDP per head in their respective countries (Lombardia, Bolzano and Valle d'Aosta in Italy, Madrid, Navarra and Cataluña in Spain, Köln in Germany). In a number of them — in Germany and northern Italy, in particular — GDP growth was relatively low during this period, which might have been a contributory factor (though the lack of growth of productivity was itself a potential cause of the low growth). In the Spanish regions, however, GDP growth was above the EU average, which suggests that such growth might be difficult to sustain over the long-term, in the absence of the improvements in efficiency and development of high value-added activities which productivity growth tends to reflect.

The counterpart of the lack of productivity growth in Spain is a high rate of employment growth, which in a sense has fuelled the growth of GDP and has provided much needed jobs for a substantial proportion of the population who were previously unemployed or economically inactive. In Italy, a similar lack of productivity growth has occurred in a context of low growth of GDP and sustained growth of employment. Conversely, the high rate of productivity growth in regions in the new Member States has occurred in

1.11 Productivity in Member States and regional extremes, 2004



Source: Eurostat


1.5 Growth of GDP per head, employment and labour productivity, 1995-2004
Growth of GDP per head
Employment growth
Growth of GDP per person employed
Annual average % change
< -1.0
-1.0 - 0.0
0.0 - 0.6
0.6 - 1.2
1.2 - 1.8
1.8 - 2.4
2.4 - 3.2
>= 3.2
no data
0
1,000 Km

many cases with little or no increase in jobs in a context where the proportion of people of working age in employment is relatively low — indeed, similar to the level in Spain in the mid-1990s.

The challenge facing both sets of regions, as emphasised above, is to achieve simultaneously both a growth rate of productivity in line with the need to maintain and strengthen competitiveness and a rate of net job creation which provides employment for all those who want to work.

Employment growth in the EU

At national level

Employment growth averaged just under 1% a year in the EU-27 over the period 1995–2004. There was a marked difference, however, between the relatively high rate of increase up to 2001 and the absence of any growth at all in the two last years when GDP increased relatively little. Employment growth was particularly high throughout the period in Spain, as noted above (3.3% a year) and was also above the EU average in Italy — one of the few countries in which employment growth was maintained after 2001 — France and the UK. In Germany, on the other hand, growth was below average and employment fell significantly after 2001. In Portugal, employment rose by almost 2% a year up to 2001 but has hardly risen at all since then reflecting the low rate of GDP growth. In Greece employment increased by much less than the EU average up to 2001 (by only around 0.5% a year), but has risen at a much higher rate since 2002 (by almost 2% a year up to 2005).

Most of the other countries, apart from the new Member States, experienced a relatively high rate of employment expansion between 1995 and 2001 — over 2% a year in the Netherlands and Finland, 4% a year in Luxembourg and over 5% a year in Ireland — and little increase or a reduction in the subsequent two years. Since 2003, employment has risen but by less than 1% a year in most cases.

In the new Member States, employment declined significantly in most countries up to 2001, the main exceptions being Hungary and Cyprus, but it has begun to increase in many of them since, though at a relatively slow rate except in Latvia and Lithuania. In Poland and Hungary, employment has barely changed since 2001.

… And at regional level

Almost all regions (nine out of ten) with a GDP per head above 75% of the EU average experienced employment growth between 1995 and 2004, the average being 1.2% a year for the group as a whole (Map 1.5).

Only sixteen of these regions experienced a reduction in employment of more than 0.1% a year over these nine years. These were 13 regions in Eastern Germany and Mazowieckie in Poland and two regions in Northern England. The highest rates of increase occurred in regions in Spain, Ireland and the south east of the UK.

In contrast, employment in regions with GDP per head below 75% of the EU average declined on average by 1% a year. In half of the regions employment fell, the largest reductions (over 3% a year) occurring in a number of Polish and Romanian regions.

The sectoral structure of EU employment reflects the continued shift towards a service economy and the ongoing decline in employment in agriculture and industry. Since 2000, total employment in the EU has increased by 8.5 million, mainly driven by strong net employment creation of almost 11.5 million in the service sector. The latter has more than made up for the employment contraction in industry (down 1.6 million) and agriculture (down 1.2 million) since 2000.

Within industry, employment has contracted particularly strongly in manufacturing, where it has fallen by 2.2 million (or about 6% on 2000 levels), although this has been offset to a certain extent by the rise in employment of 0.8 million in the construction sector. Within services, where employment has expanded in all sub-sectors apart from «financial intermediation», the main drivers of employment creation have been real estate, renting and business activities (up 3.5

million), health and social work (up 2.3 million) and education (up 1.3 million).

Employment rates

The low growth of employment across the EU since 2001 has slowed progress towards achieving the Lisbon and Stockholm employment targets. Given the limited prospects for increased employment growth in the immediate future, the overall aim of ensuring that at least 70% of people of working age (defined as those aged 15–64) are employed by 2010 now seems unlikely to be attained until a few years after this. Recent progress towards the female and people aged 55–64 targets is nevertheless encouraging. Since 2000, the female employment rate has risen by 2.7 percentage points to 56.3% (the target is 60%) and the older workers' employment rate by 5.9 percentage points to 42.5%, although for the latter with a target of 50%, there remains a long way to go.

Much of the slow progress can be attributed to the decline in employment in Germany and Poland, though in 2005, there are signs of some improvement in the latter. At the same time, employment rates in Greece and Italy remain well below the targets and still exhibit marked gender differences.

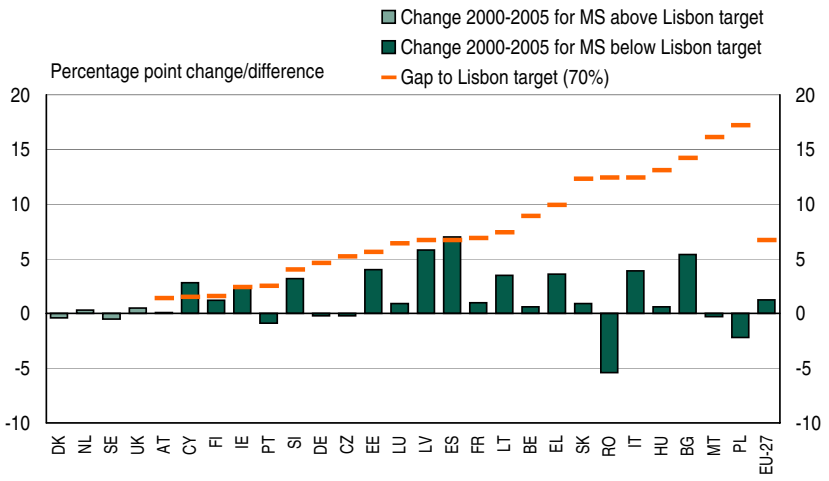
In 2005, as in 2000 when the target was first set, only four Member States (Denmark, the Netherlands, Sweden and the UK) had employment rates above the 70% objective, though five countries (Austria, Cyprus, Finland, Ireland and Portugal) are within 3 percentage points of it. The biggest increases in the rate since 2000 have been in Spain (a rise of over 6 percentage points), Cyprus, the three Baltic States, Greece, Italy, and Bulgaria. Nevertheless, the rate remains over 10 percentage points below the target in the last three of these countries as well as in Hungary, Poland, Malta and Romania. In Poland as well as Portugal, Germany, Denmark, Sweden, Romania, Malta and the Czech Republic rates have declined since 2000 (Fig. 1.12).

Nine Member States met the employment rate target for women of 60% in 2005, three more than in 2000 (the three being Estonia, Austria and Slovenia), while another six, including France and Germany, were within 3 percentage points (Fig. 1.13). In Greece, Italy and Poland, however, the rate was over 10 percentage points below the target and in Malta, over 26 percentage points. Since 2000, large increases in the employment of women have occurred in the same countries in which the overall rate has risen (indeed they have been the primary cause of this), with particularly big rises in Spain, Italy, Latvia and Estonia.

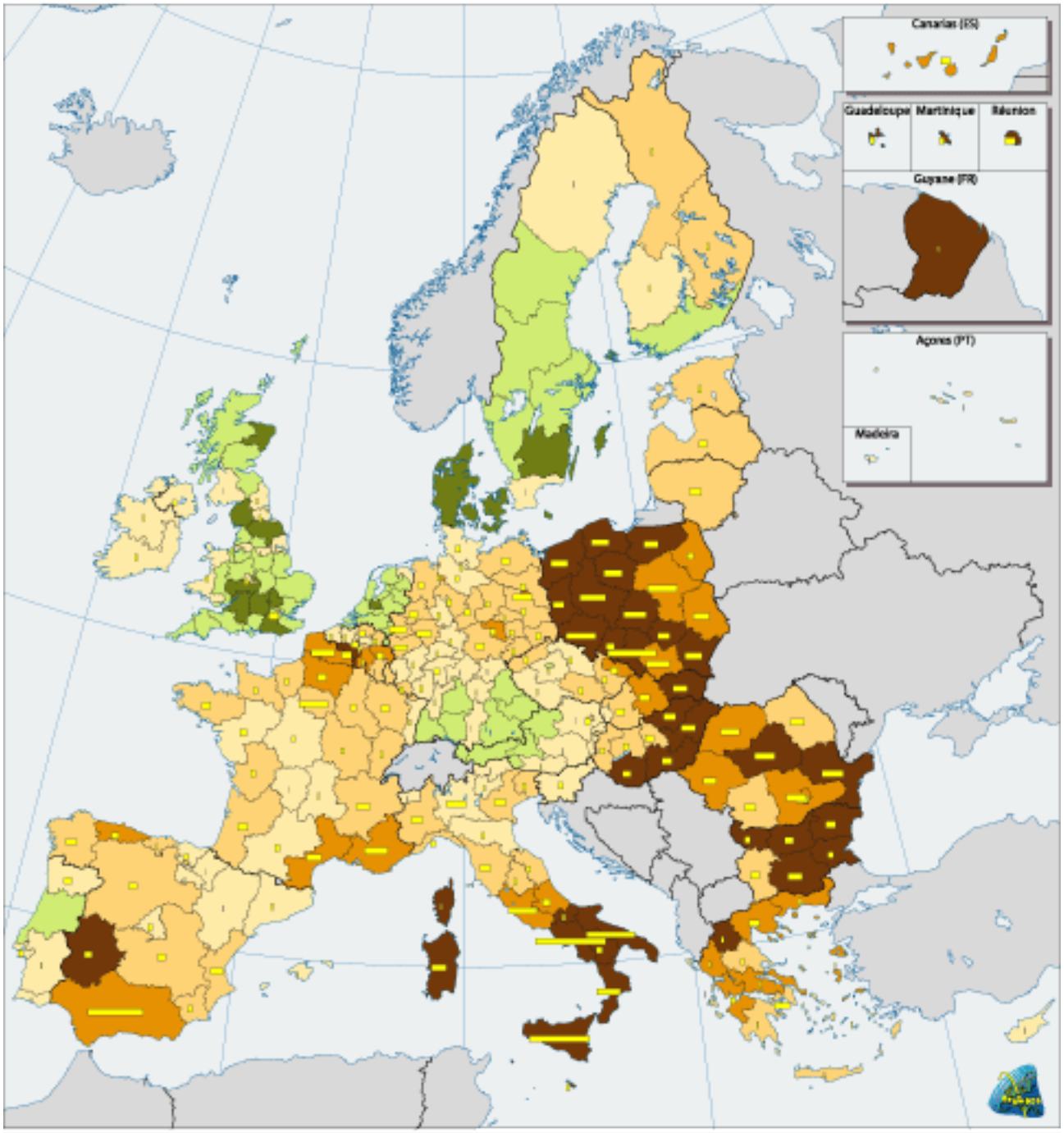
Gender pay gaps reducing at a much slower pace than the gender employment gap

Despite reductions in the gender employment gap, the gender pay gap (in unadjusted form) — measuring the difference in average gross hourly earnings between men and women across the whole economy and all establishments — one of the structural indicators to monitor progress under the Lisbon Strategy — has narrowed only marginally since 2000. In 2000, women in the EU had, on average, 16% lower hourly earnings than men, the gap ranging from below 10% in Portugal and Italy to 20%

1.12 Change in employment rates, 2000-2005



Employment rate equals number employed aged 15-64 as a percentage of population aged 15-64
Source: Eurostat



1.6 Employment rate in 2005 and employment rate deficit compared to Lisbon target

Employment rate
% of population 15-64

- 41 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 100

Employment deficit (thousands of employed)

- 1000
- 750
- 500
- 250
- 100
- 50

Number of employed to be added
to reach an employment rate of 70 %

Source: Eurostat, DG REGIO

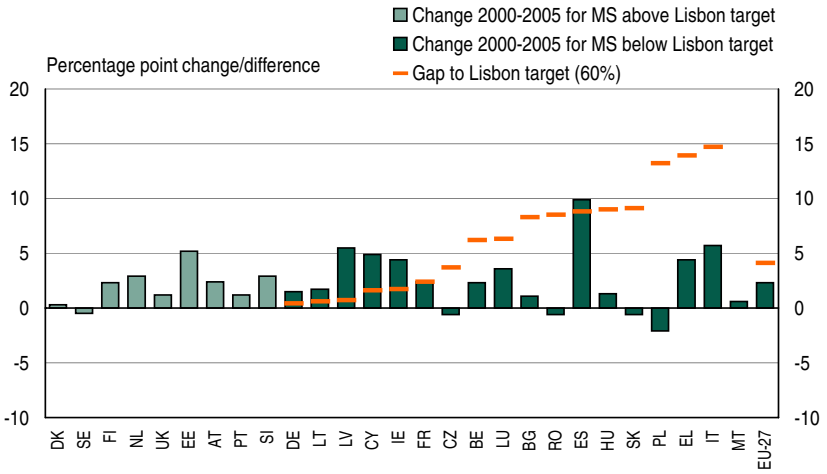
0 500 Km

or more in Austria, Germany, the Netherlands and the UK. In 2005, their earnings were 15% lower than men's and still 20% or more in Germany and the UK. On the other hand, there were several more countries where the gap was below 10%, including Belgium, Ireland and Greece.

The employment rate for older people — those aged 55–64 — increased by some 6 percentage points in the EU-27 as a whole between 2000 and 2005 (from 36.6% to 42.5% — Fig. 1.14). This increase contrasts markedly with the downward trend in the rate over many years before reflecting the tendency towards early retirement in many countries, encouraged initially by governments in the context of high rates of unemployment. Despite the increase, however, in 2005 it still remained over 7 percentage points below the target of 50% to be achieved by 2010.

Eight Member States had employment rates for this age group above the target in 2005, four more than in 2000 (these being Estonia, Finland, Cyprus and Ireland), while in both Latvia and Lithuania, rates were only marginally below. Despite the large increases in employment of 55–64 olds since 2000 — which exceeded 10 percentage points in Hungary as well as in Latvia and Finland — the proportion of this age group in work in 2005 was still between 10 and 23 percentage points below the 50% target in 12 Member States. Poland, the country with the lowest employment rate for older people in 2005, was the only country where this rate declined noticeably between 2000 and 2005.

1.13 Change in female employment rates, 2000-2005



Employment rate equals number women employed aged 15-64 as a percentage of women aged 15-64

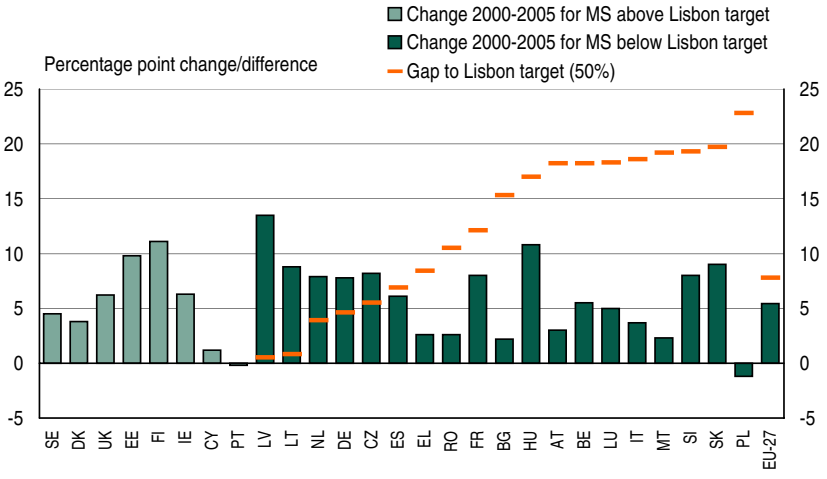
Source: Eurostat

At regional level disparities are larger than at national level …

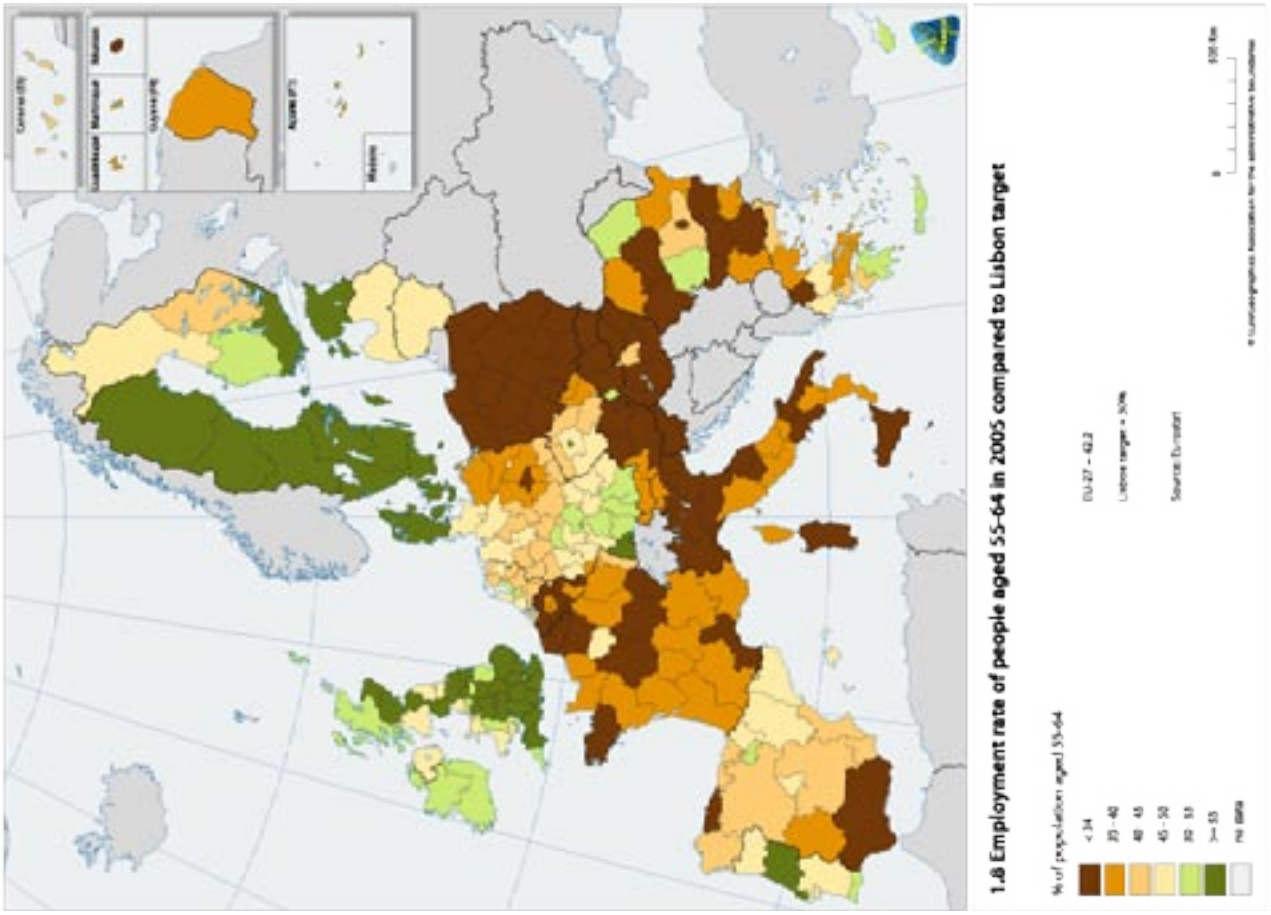
The employment rates at national level conceal wide variations across regions, reflecting the regional and, indeed, local nature of employment problems (Maps 1.6 to 1.8).

Regional disparities in employment and unemployment have long been a key focus of EU policies, not only because of the effect of low employment rates in parts of the EU on the achievement of the Lisbon tar-

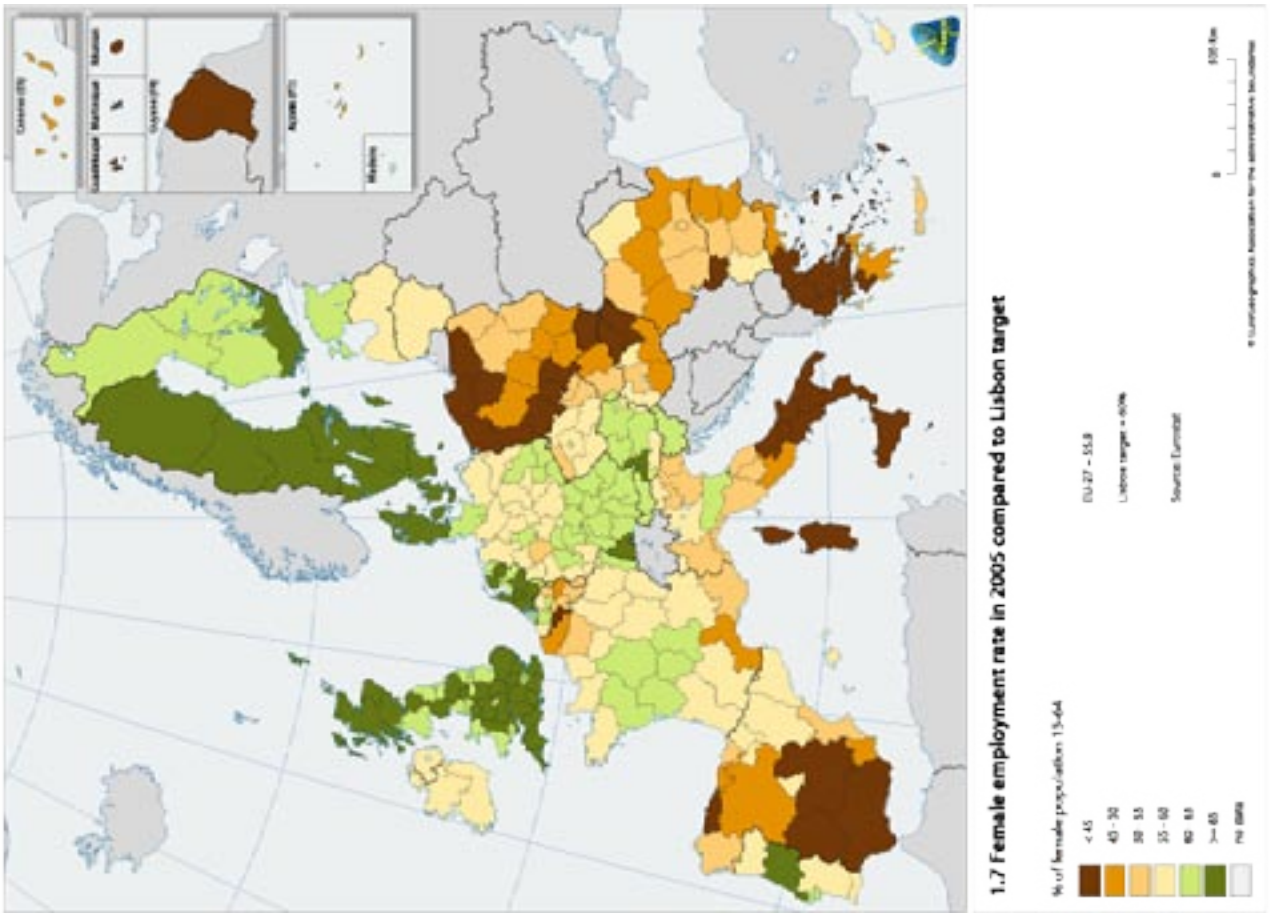
1.14 Change in employment rates of people aged 55-64, 2000-2005



Source: Eurostat



1.8 Employment rate of people aged 55–64 in 2005 compared to Lisbon target



1.7 Female employment rate in 2005 compared to Lisbon target

gets but more importantly their implications for social cohesion. Between 2000 and 2005, there was some convergence of employment rates across regions in the EU-27. Over these five years, the difference in the average employment rate of the 10% of regions where rates were highest and the 10% where they were lowest declined from 30 percentage points to 27 percentage points[3]. Two other statistical measures (the Gini coefficient and coefficient of variation) also declined.

In 2005, however, employment rates in the lagging regions were some 11 percentage points lower than those in the rest of the Union (57% against 67%), more than in 2000 (9 percentage points). Despite some increase over this period, employment rates remain particularly low in the south of Italy, five regions (Campania, Puglia, Basilicata, Calabria and Sicilia) having rates below 50% of working-age population in 2005 and Sicilia a rate of just 44%. This compares with rates of 78% in the UK region of Bedfordshire and Hertfordshire, a difference of almost 35 percentage points.

The disparity in employment rates across regions is also relatively wide in Spain, reflecting the still large differences in economic development between the regions. While regional variations in employment rates are relatively low in Poland and Romania, this reflects the large number of people in rural areas employed in agriculture, mostly in subsistence farming, which serves as a residual means of support for those unable to find work in other activities (Fig. 1.15).

… Though decreasing in several Member States

There was a slight tendency for regional disparities in employment rates within Member States to narrow between 2000 and 2005. This was the case in most countries, most especially in Bulgaria, Spain, Italy, Sweden and the UK. At the same time, disparities widened in Austria, Belgium, Slovakia and Hungary.

3 These figures are adjusted for differences in population size between regions. They, therefore, relate to the top and bottom regions, in terms of employment rates, which account in each case for 10% of EU population.

Regional employment rates in the US

The variation in the total employment rate (measured as the total employed relative to population 15-64) between the 180 US economic areas is far smaller than in the EU. In the EU, the total employment rate is 60% higher in the 10% of regions where this is highest than in the 10% where it is lowest, whereas in the US, the difference is only 22%. Confining the comparison to the EU-15 only does not dramatically alter the picture (the gap of 60% is reduced to 56%). This underlines the fact that the US labour market is more integrated than in the EU and population is more mobile.

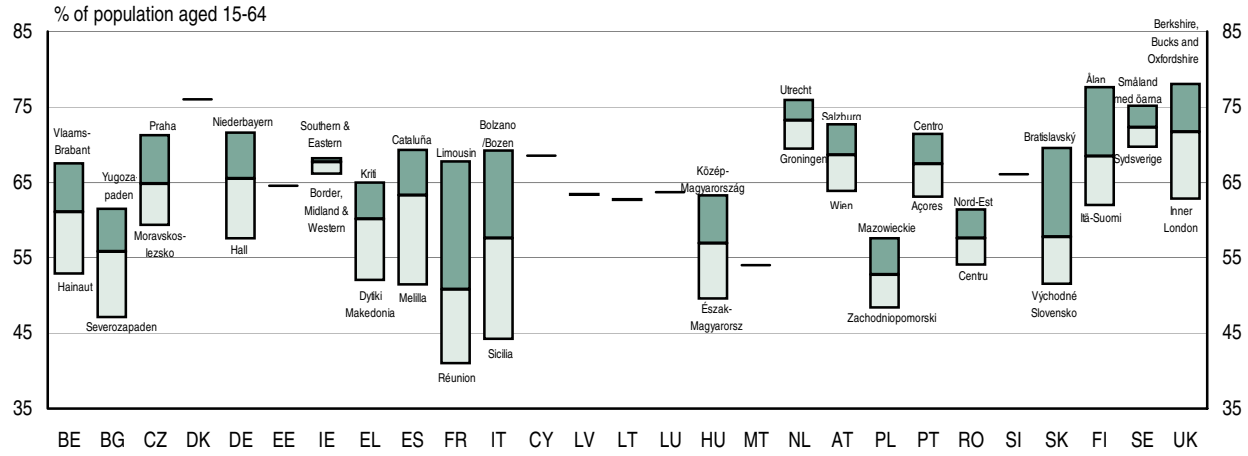
Overall, the US employment rate is 10 percentage points higher than that of the EU. Most of this difference is due to higher employment of the group aged 15-64 (8.5 percentage points), the remaining 1.5 percentage points are due to the far larger number of those aged 65 and older in work in the US than in the EU (14% as compared with 3%).

Nevertheless, the average employment rate in lagging regions taken together was not only 11 percentage points lower than in the other regions in 2005, but it has also decreased by half a percentage point since 2000, while in the other regions it has increased by 1.5 percentage points.

There are, however, marked differences in the experience over this period across the EU. In all the regions of Bulgaria, Spain and Italy the employment rate increased. In Greece, employment rates increased in all but three regions. In contrast in all of Romania and all but two regions in Poland the rate declined. In Portugal and Hungary about half the regions saw their employment rate decline, in some cases by more than two percentage points.

To achieve the Lisbon employment rate target of 70% of working-age population, the number employed in the EU needs to increase by well over 20 million in the coming years. For the sake of cohesion, these extra jobs need to be created mainly in regions where employment is particularly low, namely in southern Italian and Polish regions (Map 1.6).

1.15 Employment rate (15-64) in Member States and regional extremes, 2005



Source: Eurostat

Unemployment rates

Unemployment is not entirely the mirror image of employment. A country or region with a low employment rate will not necessarily have a high rate of unemployment but instead perhaps a large number of people who do not participate in the labour market at all. This is the case of women in Southern Italy, for example. Not all of those concerned either here or elsewhere in the EU will have taken a deliberate decision not to work. Many will have decided not to look for a job because they consider they would be unlikely to find one but would enter the labour market if the situation changed. Indeed, when employment increases it is generally accompanied by a rise in labour market participation as well as a fall in unemployment. Accordingly, unemployment can give a misleading indication of the number of people who would like to work but cannot find a job and, therefore, of the size of the potential work force. Nevertheless, it is the most visible sign of labour market imbalance and of the threat this poses to social cohesion.

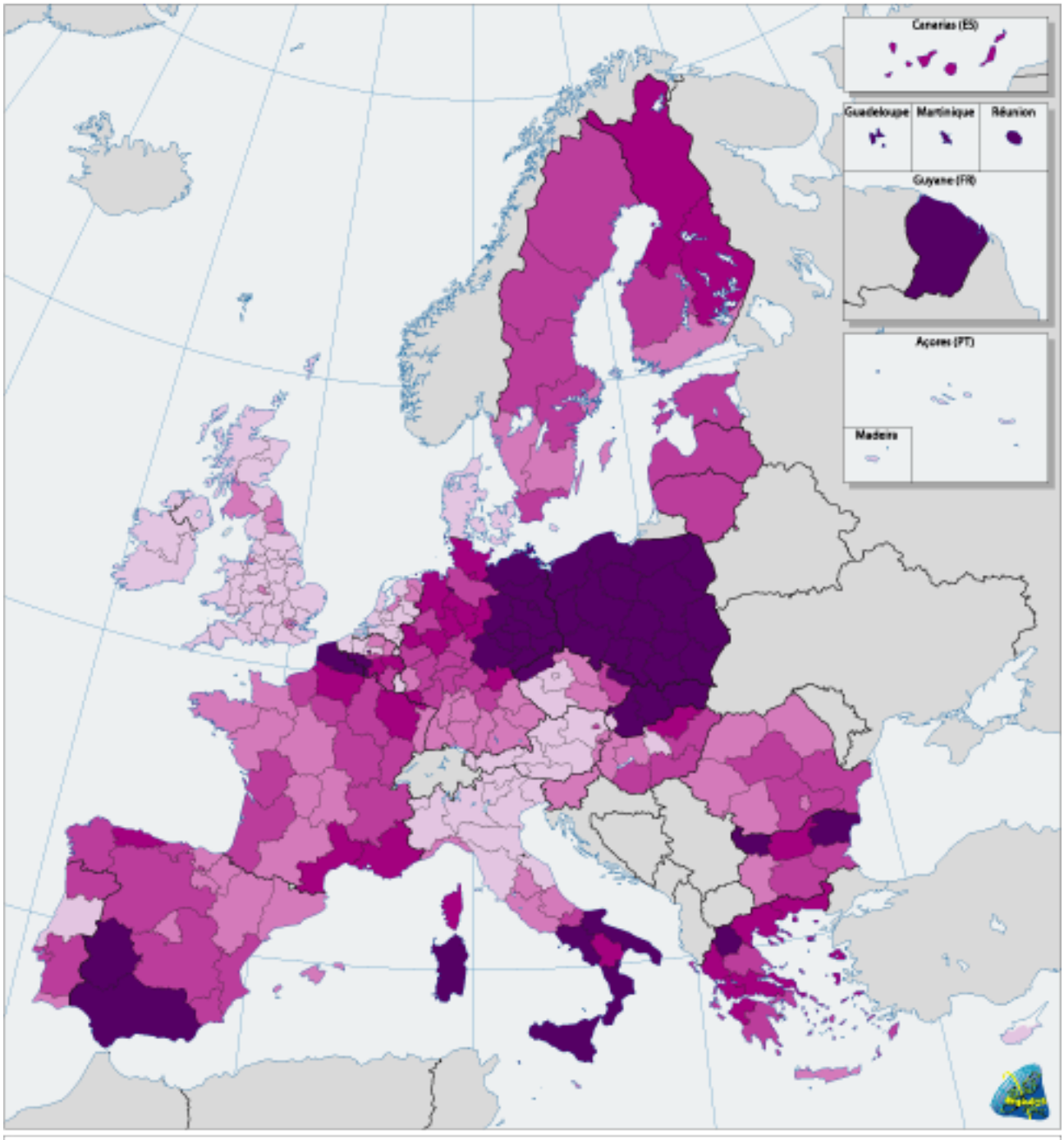
Unemployment in the EU-27

Between 2000 and 2005 the overall unemployment rate in the EU-27 increased marginally (from 8.6% of the labour force to 8.7%) (Map 1.9). There were, however, considerable variations between countries. In 8 Member States, unemployment increased by around 1½ percentage points or more (by almost 4 percentage points in Portugal), in 10, it changed by less than 1 percentage point and in 9, it fell by more than this — in the three Baltic States plus Bulgaria, by over 5 percentage points (Fig. 1.16).

While the unemployment rate of men increased slightly over the period (from 7.5% to 7.9%), unemployment among women fell slightly (from 10.0% to 9.7%). As a result the gap between the two narrowed. The gap between the male and female unemployment rate in 2000 was the highest in Greece (6.6 percentage points), Spain (4.6), Italy (3.6) and Poland (3.1). In Greece this gap had barely narrowed by 2005 a reduction of 0.3 of a percentage point, while the other three reduced the gap by between 1 percentage point and 2.6 percentage points.

At 18.6%, the youth unemployment rate still remains around twice as high as the overall unemployment rate, pointing to an over-supply of relatively low-skilled, inexperienced young workers. Furthermore, large disparities are still evident across the Member States, with rates above 20% in eight countries, and especially high in Slovakia and Poland at around 30% and 37% respectively, but as low as around 8.5% in Denmark, Ireland and the Netherlands.

Still, the youth unemployment rate (of those aged under 25) in the EU-27 increased by 0.7 of a per-



1.9 Unemployment rate, 2005

% of labour force

- < 5.55
- 5.55 - 7.85
- 7.85 - 10.15
- 10.15 - 12.45
- >= 12.45
- no data

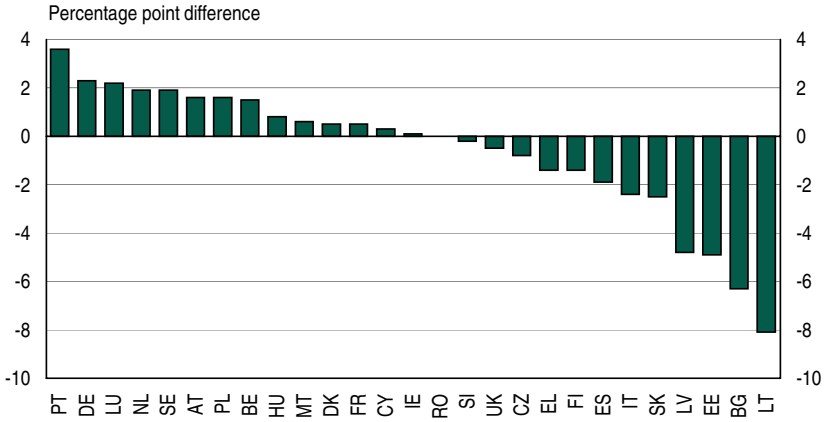
EU-27 = 9.0
Standard deviation = 4.64

Source: Eurostat

0 500 Km

centage points between 2000 and 2005, but again this average hides much variation. In Bulgaria, the Baltic States, and Slovakia, youth unemployment rate fell by more than 6 percentage points, while in five Member States, including Portugal and Hungary, it increased by more than 5 percentage points.

1.16 Change in unemployment rates, 2000-2005



Unemployment rate is the number unemployed as a percentage of the labour force

Source: Eurostat

The rate of long-term unemployment[4] in the EU was 4% in 2005, the same as in 2000. While a number of Member States recorded a substantial reduction over this period, especially Latvia, Lithuania and Bulgaria, the rate in creased by almost 3 percentage points in Poland and by 2 percentage points in Slovakia, in both of which rates were already high (10% and 12% respectively) (Map 1.10).

Across the EU, long-term unemployment continues to be significantly higher for women (4.5% in 2005) than for men (3.6%), with the widest differences, as for the overall unemployment rate, occurring in Spain and Italy as well as in Poland (in each case the gap being 2 percentage points or more), but above all in Greece (8.9% for women, 2.6% for men).

Unemployment at the regional level

As in the case of employment, regional disparities in unemployment rates narrowed between 2000 and 2005, the difference in the average rate between the top and the bottom 10% of regions (again defined in terms of population) declining from 19 percentage points to 16 (Fig. 1.17). (Other measures of regional dispersion, such as the Gini coefficient, also declined.)

In the lagging regions, unemployment fell from an average of 13.4% to 12.4% over the period, the largest falls being in the Bulgarian and Southern Italian regions as well as in the Baltic States. In 17 of these regions, however, — mostly concentrated in Poland, Portugal, Greece and Hungary — unemployment increased by over 2 percentage points.

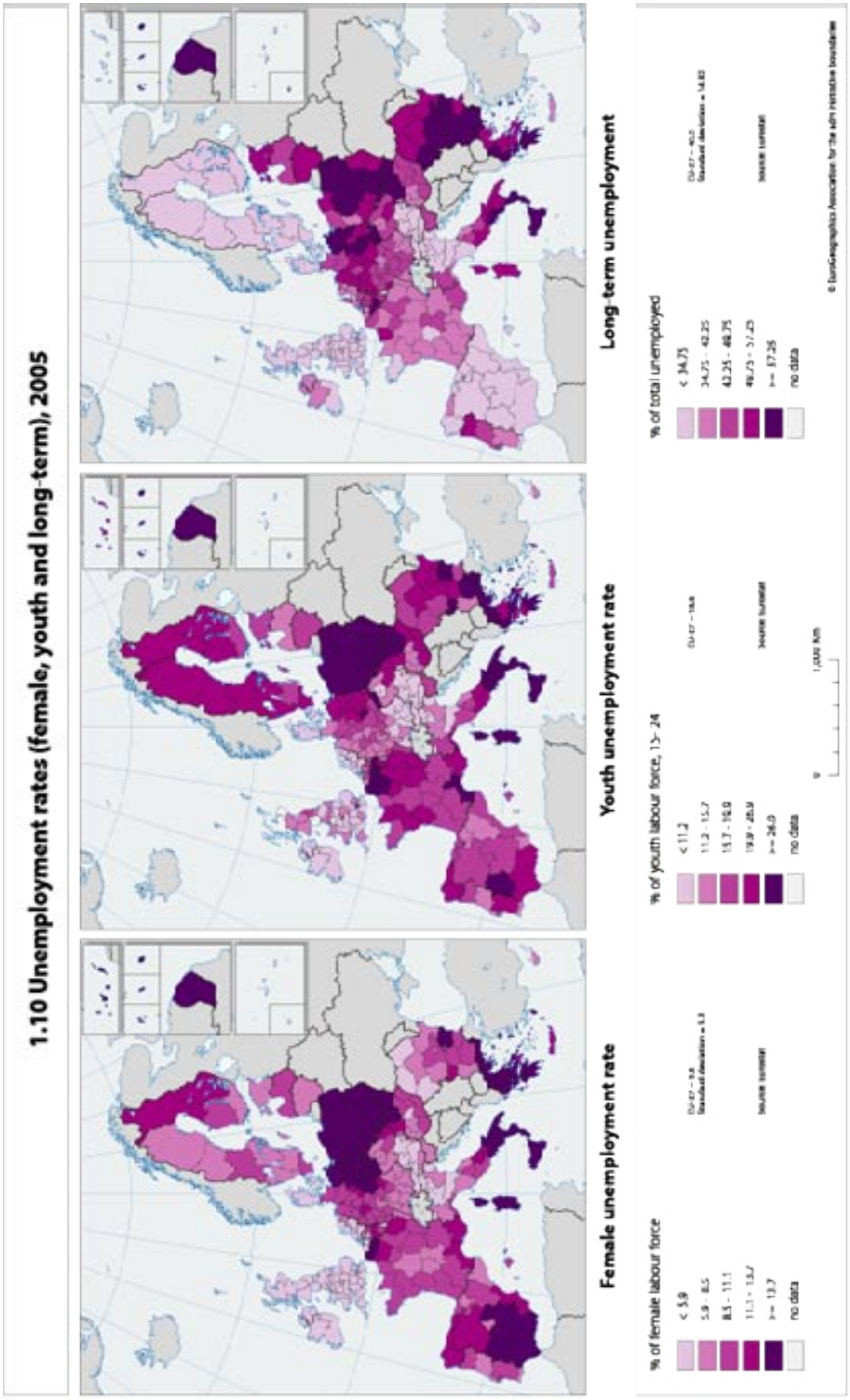
In the more developed regions (those with GDP per head above 75% of the EU average), by contrast, unemployment remained stable between 2000 and 2005 at just below 8%, though with Spanish, Italian, French and UK regions generally experiencing a reduction and German, Austrian, Dutch and Belgian regions, some increase. The increase was especially marked in Germany. In this group of regions, 44 experienced an increase in unemployment of more than 4 percentage points, 33 of them in Germany.

The risk of poverty

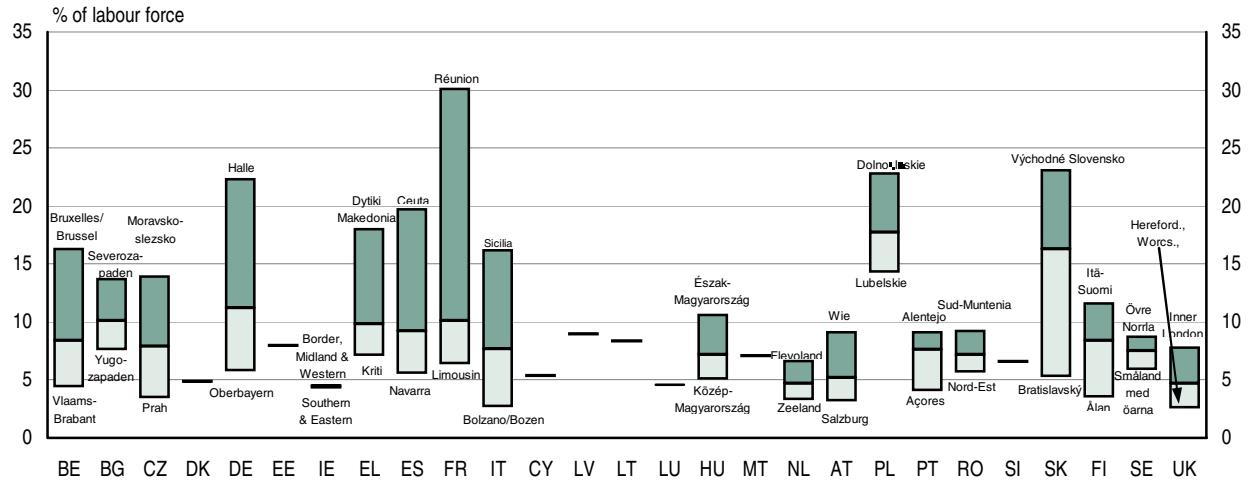
Although there is no measure of the number of people across the EU-27 living in poverty in an absolute sense, there are indicators of those whose income is low enough to put them at risk of being socially excluded in a relative sense. These were defined by the Member States through the Open Method of Co-ordination on Social Inclusion in June 2006 as those with disposable income below 60% of the national average level of income, as measured by the median, on the assumption that household income is distributed evenly between all members[5]. Such people, it is

4 Those unemployed and actively looking for work for 12 months or more as a percentage of the labour force

5 Those at risk of poverty are defined as having an "equivalised income" (which takes into account the household size and composition) below 60% of the national median level.


1.10 Unemployment rates (female, youth and long-term), 2005
Female unemployment rate
Youth unemployment rate
Long-term unemployment
% of female labour force
% of youth labour force, 15-24
% of total unemployed
no data

1.17 Unemployment rates in Member States and regional extremes, 2005



Source: Eurostat

argued, might well be unable to afford the standard of living which most people in the country concerned take for granted and, accordingly, may be deprived in a relative sense, even if in some cases they may still be better off in absolute terms than many in parts of the EU where average income levels are much lower.

According to the latest data (collected in 2005 for income in 2004), the proportion of the population at risk of poverty, defined in relative terms, ranges from 21% in Lithuania and Poland and 20% in Ireland, Greece, Spain and Portugal to 11% in the Netherlands, 10% in the Czech Republic and 9% in Sweden. On average, on this measure, 16% of the EU population, or around 75 million people, were at risk of poverty in 2004 (Fig. 1.18).

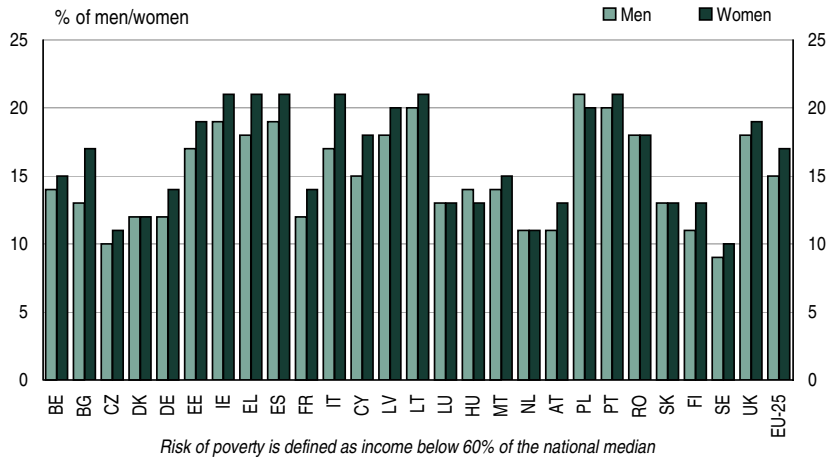
A slightly larger proportion of women than men have income below the poverty line, 17% on average as opposed to 15%. In Bulgaria and Italy the difference reaches 4 percentage points. In all Member States, apart from Hungary and Poland, the relative number of women with income this low is either larger than that of men or much the same, partly reflecting the larger numbers of women than men aged 65 and over and the relatively large proportion of these living alone and dependent on a retirement pension. However, when looking at the gender dimension, it is important to interpret figures with caution since they assume equal distribution of resources within the household, which might not necessarily be the case[6].

The risk of poverty is even higher for children, young people and the elderly

The young have the highest at-risk-of-poverty rate, at 19% for children under 18 and 18% for the 18–24 age group. The rate then declines with age as individuals progress in the labour market, before it rises again after people retire and no longer have income from work. The risk of poverty for children is particularly high in Poland (29%), Lithuania (27%) and Romania (25%). One person households, especially those with dependent children tend to have the highest poverty risk, some 33% of lone parents with a dependent child in the EU having income below the poverty line. Poverty among children, it is widely recognised, can potentially affect their development and future opportunities and so the life chances of future generations.

6 The newly implemented reference source of statistics on income and social exclusion is the European Survey on Income and Living Conditions (EU-SILC) framework regulation (No.1177/2003). In 2007, for the first time, EU-SILC data is available for 25 EU Countries. During the transition to EU-SILC, income based indicators were calculated on the basis of available national sources (household budget survey, micro-censuses, etc.) that were not fully compatible with the SILC methodology based on detailed income. Following the implementation of EU-SILC, the values of income based indicators cannot be compared to the estimates presented in previous years. This is why no trends in income based indicators are presented in this report.

1.18 Men and women at risk of poverty in Member States, 2004



BG, RO: 2003; SI: no data
Source:

The risk of poverty for people aged 65 and more is particularly high in Ireland (33%) and Cyprus (51%), while it is also significantly higher than for the population as a whole in a number of Member States. Older women, without exception, are at greater risk of poverty than older men, who are on the whole no more exposed to the risk of poverty than their younger counterparts. The most elderly, those aged 75 and over, in which women are in the majority, tend to be most at risk of poverty for a number of reasons, not least the lower incomes on which their pensions are based and the fact that in some countries the rules on indexation mean that pensions fail to keep pace with the growth of average earnings.

At the same time, the risk-of-poverty rates take account only of monetary income and leave out of account the wealth which those in retirement might possess, particularly their house (which means that they tend to have relatively low housing costs) and accumulated savings. Accordingly, the risk of deprivation among pensioners might well be somewhat less than implied by the poverty measure.

As indicated above, the at-risk-of-poverty rates presented here are specific to each country and are measured in relation to very different levels of income. People with a given level of income in absolute terms might therefore be classified as being at risk of poverty in one Member State but not be in another.

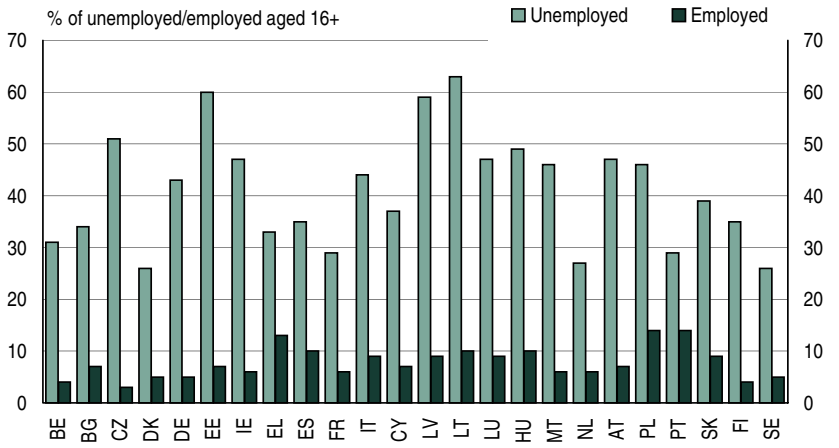
The income threshold against which the risk of poverty is assessed is much lower, measured in purchasing power parity terms (i.e. taking account of the difference in price levels) in the new Member States and former Cohesion countries than in the rest of the EU. This threshold, therefore, is over 7 times higher in Luxembourg and 4 times higher in Austria than in Latvia, Lithuania and Bulgaria and higher still (12 and 8 times) than in Romania. This means that the at-risk-of-poverty threshold for a single person household varies from EUR 558 a year in Romania to EUR 17,087 a year in Luxembourg. In Romania, therefore, single people at risk of poverty have to live on income of less than two euros a day and in Bulgaria, Latvia and Lithuania, less than four euros a day.

In Member States where poverty affects a relatively large proportion of the population, it also tends to be more severe, though this is not always the case. Head count figures in themselves do not indicate how far below the threshold the income of people at risk of poverty is. On average in 2004, the gap between the median income of those at risk of poverty and the poverty line itself in the EU was 23%. Member States with the smallest proportion of people at risk of poverty also tend to have the lowest intensity of poverty as well and *vice versa* in most Member States with the largest proportion at risk. This is particularly the case in Poland, where the median income of those at risk of poverty was some 30% below the poverty threshold.

Member States with the lowest proportion of people at risk of poverty tend also to have the most equal dis-

tribution of income. This, however, is only a partial indicator of social cohesion within Member States. It is also relevant to know how the income of those at the bottom end of the distribution compares with the income of those at the top This can be assessed by the ratio of the top quintile (the income received by the 20% of the population with the highest income) to the bottom quintile (the income received by the bottom 20%)[7]. On average in EU Member States, this ratio was 4.9 in 2004, which means that the income of someone 20% from the top of the distribution was nearly 5 times higher than that received by someone 20% from the bottom. In Portugal, however, this ratio was over 8, while in Lithuania, Latvia and Poland, it was only slightly less.

1.19 Proportion of unemployed and employed at risk of poverty, 2004



BG: 2003; RO, SI, UK: no data
Source: Eurostat

The risk of poverty is especially high for the unemployed

Being unemployed entails significantly more risk of having income below the poverty line than being in work throughout the EU, despite the income support schemes which exist in all Member States. The proportion of those who spent more than half of the year (2004) unemployed who had a poverty-level of income, therefore, ranged from a low of 26% in Denmark and Sweden — still 5 times higher than the proportion with this level of income who spent most of the year in employment — to a high of around 60% in each of the three Baltic States, over 6 times greater than for those who were mainly employed (Fig. 1.19). In 9 of the other 24 Member States for which data are available, moreover, the relative number of unemployed at risk of poverty was around half or just under (44–51%). These include four more of the new Member States (the Czech Republic, Hungary, Poland and Malta), though they also include three of the most prosperous countries in the EU — Luxembourg, Ireland and Austria.

They do not, however, include the three EU-15 Cohesion countries — Greece, Spain and Portugal — where the difference in the risk of poverty between being employed and being unemployed is significantly lower than elsewhere. This is a reflection not of the level of unemployment benefits but of the large number of the unemployed living in households where someone is working. In addition, in each of these countries, especially in Greece and Portugal, being employed is less of a safeguard against being at risk of poverty than in other Member States, with the exception of Poland. In Greece and Portugal as well as in Poland some 13–14% of people who were employed for most of 2004 had income below the poverty line.

Structural change and economic development

The differences in levels of GDP per head across regions, as already indicated, reflect the combined effect of variations in, first, the level of productivity or the value-added — or output — produced by those employed (together of course with the capital and other factors of production they have available to work with) and, secondly in the number of people available to work who are actually employed. As seen above, both

7 More precisely, it is the ratio of the income received by the individual who is ranked at 20% from the top of the income distribution to the income received by the person who is ranked at 20% from the bottom.

the level of productivity of labour and the proportion of working-age population in work — the employment rate — are much lower in general in regions with low GDP per head than in those with higher levels. Both need to increase if these regions are to attain the income levels in much of the rest of the EU.

The low level of productivity, however, is linked not only to much lower levels of value-added per person employed in all the various sectors of activity, which have their root in a range of causes, including the method and organisation of production, the technology used, the skills of the work force and so on, but also to the relative importance of these sectors. The structure of the regional economies concerned, in other words, is biased towards low-value activities which itself has a depressing effect on the overall level of productivity and, accordingly the income generated in the region. As the regional economies develop, the relative weight of these low value-added sectors will tend to decline, just as they did in higher income parts of the EU in the past.

Low-vale added activities dominate the economic structure of less developed regions …

The pace at which this happens, however — just as the pace at which productivity growth occurs within sectors — is conditioned by the resources available, both human and physical, as well as by less tangible factors, such as the innovative capacity of the region, its system of governance and so on. The work force in the region and the enterprises located there have to possess the skills and know-how required by the higher value-added activities and need to be supported by suitable infrastructure, facilities and services for these activities to develop and expand.

The relative concentration of low income regions on low value-added activities is evident from comparing their division of value-added and employment between sectors with that in regions with higher levels of GDP per head. This, at the same time, indicates — if only in broad terms given that future development may not precisely mirror the past — the structural changes which regions will need to accommodate to attain higher levels of GDP per head (Table 1.2).

The generation of value-added in regions with GDP per head below 50% of the EU average, which are all situated in the new Member States, comes much more from agriculture and industry than in higher income regions and less from services, predominantly business and financial services and education and healthcare within public services. Equally significantly, to produce only a slightly larger share of value-

1.2 Division of value-added and employment between broad sectors by regional group, 2003

% of total

Regions grouped by GDP per head relative to EU average	Agriculture	Industry	Construction	Basic market services	Business+ financial services	Public Services
			Value added			
Under 50%	6.1	25.2	5.7	26.2	16.6	20.3
50-75%	4.9	19.5	7.5	23.3	20.6	24.1
75-100%	3.4	18.4	7.5	22.2	22.4	26.1
100-115%	2.1	22.3	6.3	21.2	24.6	23.5
115% and over	1.2	20.3	4.9	21.8	30.7	21.1
All regions	3.0	21.0	6.1	22.5	24.5	22.9
			Employment			
Under 50%	17.1	24.1	5.7	23.6	7.5	22.0
50-75%	10.1	18.8	9.0	24.8	10.3	26.9
75-100%	4.8	16.3	8.7	25.9	12.1	32.2
100-115%	3.7	18.3	7.1	25.9	14.2	30.7
115% and over	2.1	18.2	6.0	26.0	18.7	29.0
All regions	6.0	18.8	7.1	25.5	13.8	28.7

Source: Eurostat

added from agriculture than in higher income regions absorbs a considerably larger proportion of those in employment — 17% of the total in work. Shifting the work force from agriculture into other, more productive, activities would, accordingly yield a substantial gain in overall income even without any growth of productivity within sectors.

In regions with a slightly higher level of GDP per head in 2003, of 50–75% of the EU average, which include many of the Objective 1 regions at the time (i.e. before the 2004 enlargement), the division of value-added between sectors is more similar to that in higher income regions, except for a larger share in agriculture, construction and public services and a much smaller share in business and financial services. Again a relatively large share of employment is absorbed in agriculture (10%) to produce a relatively small share of total value-added (5%).

… Which are also the activities with lower productivity …

The relative levels of labour productivity implied by the sectoral division of value-added and employment and the scope for catching up in the low income regions can be seen more directly by relating value-added in the different sectors in purchasing power parity terms to the number employed (Table 1.3).

Although the level of productivity varies between sectors in all regions — it is higher in industry and business and financial services than in others (though the latter largely reflects the method of measuring value-added in financial intermediation) — the level in the lowest income regions is considerably less than in the rest of the EU. In agriculture, it was under 40% of the EU average in 2003 and in industry, under half, the latter in part reflecting the concentration on more basic manufacturing (textiles and clothing, for example) than in higher income regions where there is much more concentration on medium and high tech sectors (engineering and electronics, in particular). In services, it was closer to the level elsewhere, but it was still only around two-thirds of the EU average or less.

… And with a relative high concentration of employment

In addition to the low productivity in each sector, however, the difference in the distribution of employment between these as compared with the EU average further reduced value-added per person by almost 13%. In other words, productivity — and GDP — could be this much higher in these regions if the share of employment in each sector was the same as in other regions.

The productivity gap between regions with GDP per head of between 50% and 75% of the EU average and other regions is much narrower in all sectors, especially in services, where in each sector, value-added per person employed was less than 10% below the EU average in 2003. In agriculture and industry, on the other hand, it was well over 20% below the level elsewhere, partly in industry reflecting the relative weight of low-tech manufacturing as opposed to medium and high tech.

1.3 Value-added per person employed (in PPS) by regional income groups and broad sector, 2003

% of total across all regions in the EU

Regions grouped by GDP per head relative to EU average	Agriculture	Industry	Construction	Basic market services	Business + financial services	Public Services	Total	GDP per head	Difference in GDP per head due to difference in employment
Under 50%	22.7	55.1	53.7	58.9	120.8	49.3	52.8	41.4	78.4
50-75%	45.3	87.9	72.2	79.4	181.1	75.7	84.8	71.1	83.8
75-100%	70.6	113.8	88.8	85.7	195.8	81.3	100.2	88.5	88.3
100-115%	66.1	131.5	94.6	86.7	191.6	81.3	106.1	106.1	100.0
115% and over	66.1	140.2	97.7	101.9	205.6	87.4	121.3	135.7	111.9
All regions	58.2	115.0	86.0	86.7	186.0	78.3	100.0	100.0	100.0

Source: Eurostat

Although the broad sectoral structure of these regions is less concentrated on low value-added activities than in lower income regions, it is still the case that the relative concentration of employment in such activities as compared with the rest of the EU reduced the overall value-added generated by those in work by 6%. As a result, the overall level of productivity was some 15% below the EU average.

By contrast to the position in low income regions, in the regions with GDP per head of 15% or more above the EU average productivity in all sectors is not only higher but the concentration of employment on higher value-added activities as compared with other regions itself added over 5% to overall value-added per person employed in 2003.

Low productivity is compounded by low employment levels

The depressing effects of low productivity in the different sectors combined with the unfavourable structure of the economy, however, is not the only reason for GDP per head in the lagging regions being below that elsewhere in the EU. Low employment is also a major contributory factor. In the regions with GDP per head below 50% of the EU average, the lower proportion of the population in employment as compared with other regions reduced GDP per head in 2003 by almost 22% given the level of productivity. In other words, had the number in work in relation to population been the same as in the EU as a whole and had their productivity been the same as those already employed, GDP would have been almost 28% higher than it actually was.

In regions with GDP per head of 50–75% of the EU average, GDP per head was some 16% below the level implied by relative productivity, suggesting that it would be almost 20% higher if the level of employment was the same as the EU average. The gap between the relative level of productivity and GDP per head is also significant for regions with GDP per head between 75% and 100% of the EU average, implying that the latter could be raised by around 13% if employment could be increased to the level elsewhere.

By contrast, in regions with GDP per head of 15% or more above average, employment was also above average, reinforcing the effect of relatively high productivity on income levels. These regions, therefore, gain from having both a more productive economy and more people in work.

This makes clear that increasing GDP per head in lagging regions is not simply a question of making their economies more productive in a narrow sense but increasing the number of people in work. Such an increase is potentially important not only for the output that those at present out of work produce and the income they generate but also to maintain social cohesion. This is especially so in a context where the high rate of growth of productivity of those employed implies high growth of real wages and a widening gap between people working and those not.

Growth of value added is higher in less developed regions …

A key question in regions where GDP per head is well below the EU average and productivity is also much lower concerns the pace at which this gap in productivity is likely to be closed in the different sectors of activity, or in other words how quickly the possibilities for catching up are likely to be exploited. The experience of the period 1995 to 2003 throws some light on this.

This indicates that while sectors of activity contributed differentially to the overall increase in value-added, there was some similarity in the pattern of growth between regions with different levels of GDP per head. Growth, therefore, tended in some degree to be concentrated in the same broad sectors.

In all the regional groups, value-added in agriculture declined over this period, by more in the regions with the lowest GDP per head than in the others. Value-added in industry, on the other hand, increased in both regional groups with GDP per head below 75% of the EU average but declined, if only marginally, in regions with higher levels. Value-added in construction and services grew in all the regional groups (Table 1.4).

In each of the three broad service sectors, the rate of growth of value-added varied inversely with the level of GDP per head. In all three sectors, therefore, it was higher in the lower income regions than elsewhere and in each case lowest in the high income group.

In all the regional groups, growth of value-added in business and financial services was particularly high. In each case, therefore, there was a shift in output both from industry and, more especially, agriculture to services and within these from basic to more advanced services. The latter include education and health care, which account for much of the value-added in public services.

… But is it not matched by growth in employment

The number in work fell over this period in these regions as growth of productivity outstripped that of output. Relatively high productivity growth occurred in all broad sectors except agriculture, so narrowing the gap in value-added per person employed. In agriculture, where the gap was equally wide, productivity remained almost unchanged, so moderating the reduction in employment from the fall in output. This partly reflects the subsistence nature of the sector in many of the regions concerned and its role as an employer of last resort, in the sense that many of those unable to find work in other parts of the economy take up — or remain in — subsistence farming as a means of supporting themselves.

In industry and construction in these regions, growth of productivity exceeded the growth of value-added and employment fell. This was also the case in public services, where despite growth of value-added of almost 7% a year, the number employed declined slightly. Employment growth was, therefore, confined to basic market services and business and financial services, especially the latter, where it amounted to 3.5% a year. This, however, was not sufficient to offset job losses in the other sectors, partly reflecting the relatively small size of the service sector in these regions but more

1.4 Growth of value added, employment and productivity by regional income group, 1995–2003

% per year

Regions grouped by GDP per head relative to EU average	Agriculture	Industry	Construction	Basic market services	Business+ financial services	Public Services	Total
Gross value added							
Under 50%	-3.6	1.8	3.8	4.7	6.0	6.3	3.5
50-75%	-2.0	1.8	2.1	2.8	4.4	3.5	2.7
75-100%	-1.7	-0.1	3.4	2.3	3.6	3.0	2.1
100-115%	-1.9	-0.2	3.1	2.7	3.7	2.8	2.2
115% and over	-1.6	-0.2	1.2	1.9	3.5	2.4	1.9
All regions	-2.0	0.4	2.5	2.7	4.0	3.3	2.4
Employment							
Under 50%	-3.4	-2.6	-1.6	0.5	3.5	-0.2	-1.0
50-75%	-2.6	0.3	1.2	1.4	4.5	1.3	0.9
75-100%	-2.1	-0.5	1.9	1.5	4.1	1.5	1.2
100-115%	-0.9	-0.9	1.5	1.6	3.9	1.7	1.3
115% and over	-1.4	-1.1	0.4	1.4	4.0	1.4	1.3
All regions	-1.8	-0.9	0.8	1.3	4.0	1.3	0.9
Labour productivity							
Under 50%	-0.1	4.5	5.6	4.2	2.4	6.6	4.5
50-75%	0.7	1.5	0.9	1.4	-0.1	2.2	1.9
75-100%	0.4	0.4	1.5	0.8	-0.5	1.4	0.9
100-115%	-1.0	0.7	1.6	1.0	-0.2	1.1	0.9
115% and over	-0.2	0.9	0.8	0.6	-0.5	0.9	0.7
All regions	-0.1	1.3	1.8	1.3	0.0	2.0	1.5

Source: Eurostat

importantly the scale of productivity increases in a context of relatively high output growth.

Productivity increases were on a much smaller scale in other regions, where the productivity gap was much narrower, including those with GDP per head of between 50% and 75% of the EU average. Here net job creation in services more than compensated for large job losses in agriculture. These job gains were particularly substantial in business services (employment growing by 4.5% a year), a feature common to all the regional groups.

Such growth, combined with the growth of education and health care within public services has significant implications for the demand for labour. Together with the decline of jobs in agriculture and in industry — or at least low growth — it implies a rising demand for labour with high education and skill levels and a reduction in the demand for manual labour, both skilled and low skilled. It is coupled, moreover, as more detailed investigation shows, with a similar shift of jobs within sectors — towards managerial and professional type jobs and away from, for example, jobs on the production line — as a consequence of automation and changes in working methods. The challenge facing lagging regions is to accommodate these shifts by ensuring the availability of a work force with the education levels and the skills required as well as the provision of the infrastructure, services and amenities which support business development.

Regional characteristics remain determinants of economic structure

The structure of economic activity in regions is linked not only to the level of GDP per head but also to their inherent features. Although economic activity tends to shift from low value-added to high value-added sectors as regions develop, detailed analysis indicates that the sectoral composition of activity will continue to reflect in some degree the underlying characteristics of the regions concerned[8]. Such factors as geographical position, topology, climate, the pattern of urban settlements, cultural and industrial heritage and accumulated know-how which are important determinants of comparative advantage tend to influence the structure of the economy even in regions with relatively high levels of GDP per head.

This can be seen, for example, in regions which continue to specialise in textiles and clothing in northern Italy or in the manufacture of machine tools in western parts of Germany. The proportion of the regional work force employed in these sectors may be very small, though significantly larger than in other regions with similar levels of prosperity, but they remain important parts of the regional economy in terms of the income they generate both directly and indirectly. These areas of specialisation, therefore, tend to become less evident in terms of the relative numbers they employ as regions develop and other activities which are common to all regions — such as retailing, education and health care — expand, fuelled partly by the income generated in the areas concerned.

In short, while there is a tendency for regions to become more similar in terms of their economic structure as they grow — as they experience a common shift from primary and secondary sectors to services — aspects of specialisation remain. This has implications for their vulnerability to external events, such as the continuing process of globalisation, the depletion of traditional sources of energy and the associated increase in price, or global warming. The differential effect of these prospective developments is considered below.

8 Changing regions: Structurale changes in the EU regions, 2007 (study underatken for DG Regional Policy by Applica and wiiw).

The regional impact of global developments

Globalisation and trade liberalisation affects regions differently

The continuing process of globalisation, the entry of developing economies into industrial markets which is a major part of this and the associated intensification of competition in the markets concerned has different implications for regions in the EU. Although this process tends to be a gradual one, it can be accelerated by the sudden entry of new players into the market or changes of trade agreements. This may leave producers in the EU with limited time to react to the difficulty of competing with lower cost producers in third countries in markets for more basic products by either shifting their focus of competition from price to non-price factors, notably quality and design, or abandoning these markets completely and moving into new, less basic, ones.

Since the industries which are most exposed to increased global competition are not evenly distributed across the EU but tend to be concentrated in particular places, reflecting the differing areas of regional specialisation, some regions are much more vulnerable to this ongoing process than others. Regions specialising in textiles, clothing and leather[9], or steel-making (basic metals NACE 27) or electric, audiovisual and ICT equipment[10] are particularly vulnerable since these are industries which developing countries have moved into on a large-scale and where low costs are a primary factor of competition, at least in respect of mass-market products.

The regions with a relatively large share of employment in textiles, clothing and leather tend to have relatively low levels of income — and low labour costs — and are mainly located in the new Member States (Map 1.11). Here in a number of regions — in Bulgaria, Romania, Estonia, Lithuania and parts of Poland — the industry has expanded over recent years as a result of low costs. There are, however, a number of regions in other parts of the EU where the industry is also responsible for a large share of employment. This is particularly so in Norte in Portugal, where some 13% of all those in work are employed in textiles, more than anywhere else in the EU. Here employment has declined in recent years as competition from low cost producers in China and other parts of East Asia has intensified, especially after the ending of the Multi-Fibre Agreement in 2005.

The challenge facing Portuguese producers is to shift the basis on which they compete away from low costs to quality, style and rapid response to changing patterns of demand, as producers in northern and central parts of Italy, where the industry also accounts for a relatively large share of employment, have successfully done in the past. This requires, however, a major change in methods of working and the organisation of production. It also requires a work force with different skills than those which have traditionally been required. A similar challenge is likely to face producers in the new Member States in the years to come as their income and wage levels rise.

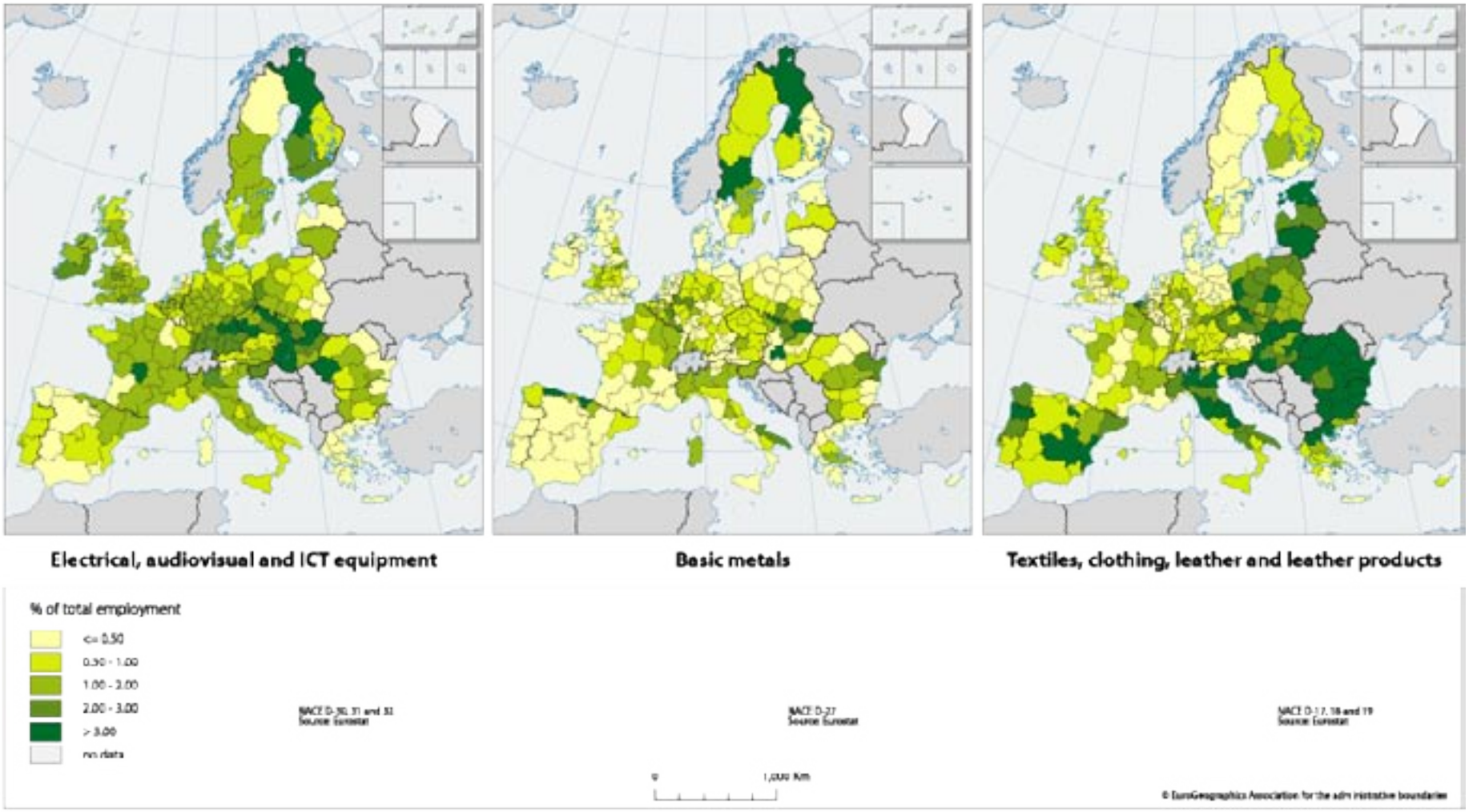
The challenge, however, extends beyond producers in the industry as such, since employment in textiles and clothing is almost certain to decline whether the strategy adopted in the industry is successful or not — whether jobs are lost through the adoption of new technology combined with the outsourcing of the more basic, labour-intensive parts of the production process, as has happened in Italy, or simply by companies closing down. The parallel challenge is, therefore, for the region to develop new activities to replace the income and jobs lost as the industry shrinks.

Much the same considerations apply to steel-making, which is more dispersed across the EU but which is still much more important for some regions than others — in Northern parts of Spain, in southern regions in Sweden and the north of Finland, as well in the industrial area in the new Member States which spans the north-eastern part of the Czech Republic (Moravskoslezko), the southern part of Poland

9 Sectors covered by NACE codes 17 (textile), 18 (clothing) and 19 (leather)

10 Sectors covered by NACE codes 30 (office machinery and computers) 31 (electrical machinery and apparatus n.e.c.) and 32 (radio, television and communication equipment and apparatus)

1.11 Employment in selected manufacturing sectors, 2005



(Slaskie) and the eastern part of Slovakia (Stredné Slovensko and Východné Slovensko).

Employment in the manufacture of electrical appliances and audiovisual and ICT equipment is also widely spread across the EU, but nevertheless with high concentrations in several Hungarian, Czech and Slovakian regions, where the share in employment is above 4%, more than three times the EU average of 1.3%. As in the case of textiles, this sector also includes activities that are less easily relocated being closely tied to companies with local headquarters such as Nokia in Finland and Hewlett-Packard in Ireland, especially when new product development is of key importance to remain competitive.

As do rising energy costs

Although it might fluctuate significantly, the price of oil is almost certain to increase over the long-term as more accessible reserves are depleted. This together with the need to reduce greenhouse gas emissions will feed through into overall energy costs. The rate at which this occurs will depend largely on the progress made in energy saving and the extent to which consumption can be reduced relative to GDP. So far, despite efforts made in this direction, energy use has continued to rise as GDP has grown.

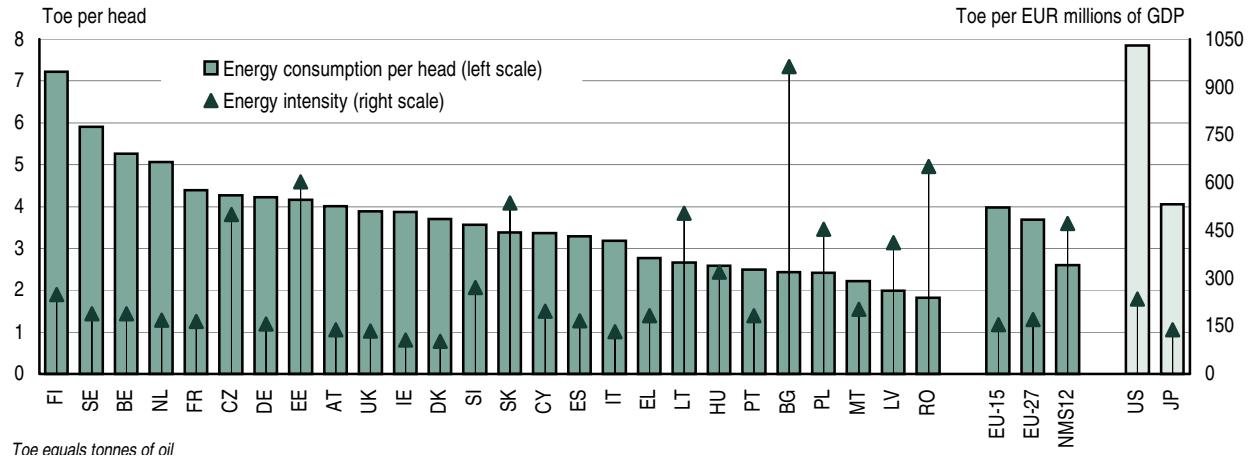
Nevertheless, it is still the case that countries with the highest level of GDP per head tend to have the lowest consumption of energy per unit of output. The most notable exception is the US which, largely because of a policy of keeping prices low, consumes 50% more energy relative to GDP than the EU-15 (Fig. 1.20).

Increases in energy costs could affect regions differentially because of varying levels of demand for energy which stem from differences in geographical location, climate and the structure of economic activity:

- Increased energy prices are likely to push up transport costs, unless they are accompanied by greater fuel efficiency to compensate. Since increased costs affect different modes of transport differentially, they are also likely to encourage shifts between these, in particular from road to rail and, where possible, to sea and inland waterways. Nevertheless, the most peripheral regions, such as the northern parts of Finland and Sweden or the most southern parts of Portugal, Spain and Italy, are likely to be most affected.

- Increases in energy prices will also tend to push up the cost of some processes and products more than others and encourage less energy-intensive methods of production and new materials to be developed, such as, for example, composite materials to replace steel which uses substan-

1.20 Energy consumption per head relative to GDP, 2004



Toe equals tonnes of oil
Energy Consumption as measured by Gross Inland Consumption. GDP in current prices in millions of Euro, using exchange rates. Data for Japan and US relate to 2003. LU is excluded because data are not comparable
Source: Eurostat

Floods, droughts and heat waves

Floods

The number of floods in the EU-27 has increased every decade since the 1960s[a], while at the same time the costs associated with them have risen substantially, partly as a result of built-up areas continuing to expand in areas prone to flooding (Map 1.12). If this continues, it could increase the frequency and scale of flood disasters because of its effect in reducing the amount of water that the soil can absorb. On top of this, climate change is likely to lead to more extreme weather patterns and itself increase the frequency of floods.

At present, 7% of people in the EU-27 live in areas at high risk of flood. This proportion varies from around 2% in Denmark to 12–13% in Austria and Slovakia[b]. In 45 of the 1275 NUTS3 regions for which data are available[c], over 20% of the population is at risk. Thirty of these regions are in Germany, 5 in Austria, 3 in Italy and 2 in Spain, France and Romania.

Droughts and heat waves

Around 9% of people in the EU-27 live in an area where there are over 120 days a year, on average, without rain (or 4 months). These areas are almost exclusively in Greece, Southern Italy, and Portugal, though there are also a few regions in the south of France and the South-East of the UK, while droughts are common in Hungary and the east of Bulgaria and Romania, though of slightly shorter duration. The frequency and duration of droughts is likely to increase as a result of global warming, with these regions at particular risk.

In addition, four countries — Cyprus, Malta, Italy and Spain — can be termed 'water-stressed', in the sense that withdrawals are more than 20% of available reserves. Global warming will reduce rainfall and increase temperatures in these countries, adding to problems of water scarcity.

The impact of heat waves is at present the focus of much research with the aim of preventing a re-occurrence of the consequences of the hot summer in 2003 when between 20 and 50 000 people are estimated to have died and loss of agricultural production amounted to around EUR 12 billion. Heat waves are expected to be commonplace by the middle of the century, putting people of 65 and over at particular risk and increasing the likelihood of fires.

a Nat Hazards, DOI 10.1007/s11069-006-9065-2, Major flood disasters in Europe: 1950–2005 by José I. Barredo. Springer Science+Business Media B.V. 2006.

b Coastal areas and areas below sea level, such as much of the Netherlands, were not included in this modelling exercise.

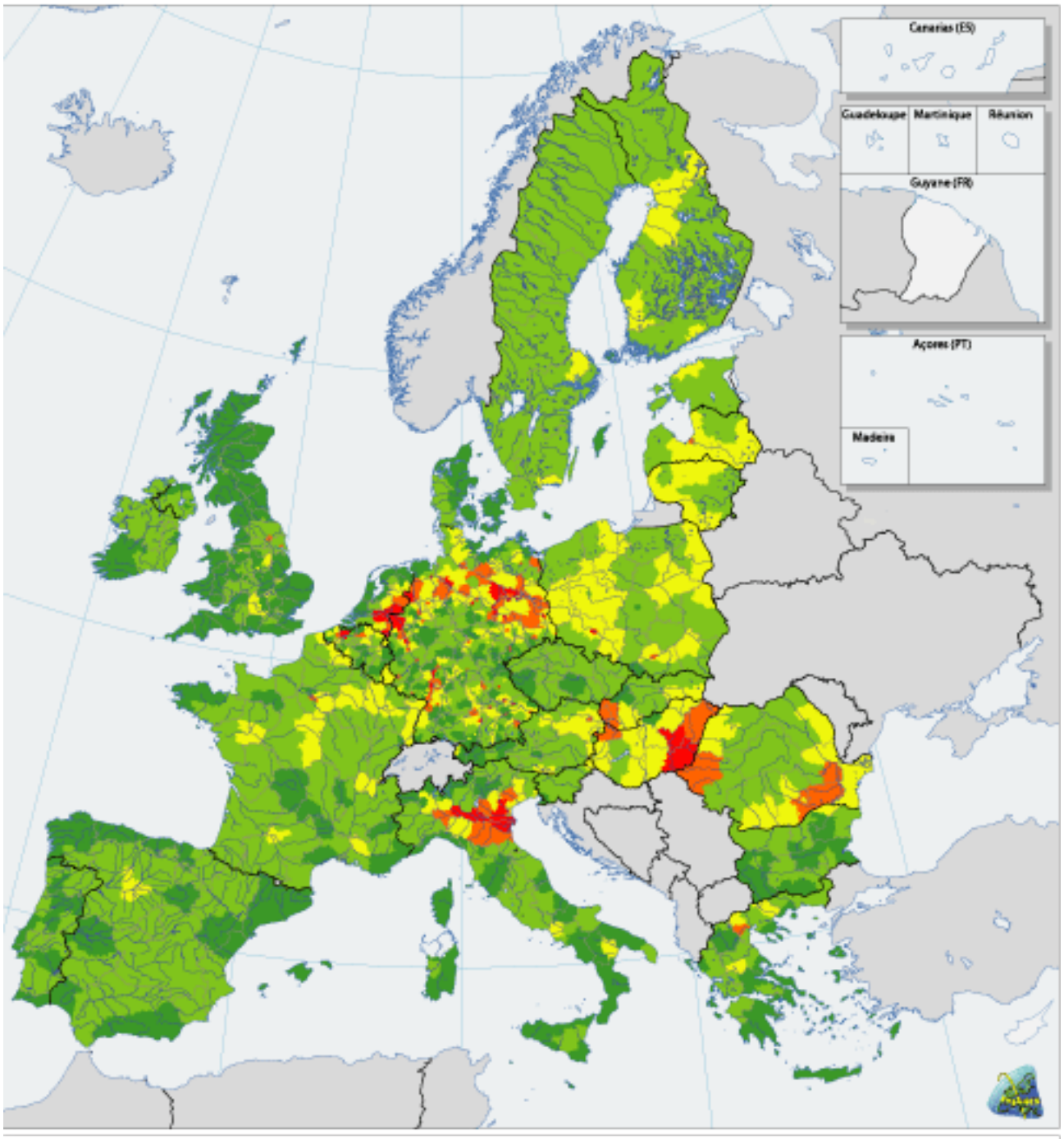
c Nine regions are missing: Canarias, Ceuta, Melilla, Guadeloupe, Martinique, Réunion, Guyane, Kypros, Açores and Madeira.

tial amounts of energy in its production. Regions which rely more than others on the industries most affected for income and jobs — the regions specialising in steel-making, for example, as noted above — will tend to lose out unless they can respond in a like way. Regions specialising in tourism could also be affected by the increased price of air travel.

- Regions where there is the possibility of developing or expanding renewable energy sources — wind power, solar, biomass or hydroelectric — could gain as energy use shifts in this direction.
- The rise in energy costs could also encourage a shift in the pattern of settlements within regions with people tending to live closer to where they work, or vice versa, though it will take some time before this is reflected in spatial development.

Global warming is also likely to affect some regions more than others

There is growing scientific evidence that increases in greenhouse gases from human activity are causing global warming, so altering weather patterns in the EU and giving rise to the prospect of more floods, droughts, heat waves and forest fires. The



1.12 Flood risk assessment in NUTS3 regions

Average risk (excluding areas below sea level)

- 0 - 0.35
- 0.35 - 0.75
- 0.75 - 1.30
- 1.30 - 2.20
- 2.20 - 4.00
- no data

Source: JRC

0 500 Km

implication of rising temperatures for regions, however, varies considerably in different parts of the EU (see Box).

In the more northerly regions of Scandinavia the Baltic States and the UK, increases in temperature of 2 or 3 degree could lead to higher agricultural yields, lower heating costs, lower winter mortality and a possible boost to tourism. But they will also change the nature of tourism, add to pollution, damage infrastructure and threaten biodiversity. In the tundra areas, for example, melting permafrost could lead to roads subsiding and release of trapped CO_2, so creating new bog land and, accordingly, new sources of methane.

In southern and central Europe, increased temperatures are likely to increase the frequency and intensity of droughts. Water availability and crop yields in southern Europe are expected to decline by 20% with a 2°C increase in global temperatures. Regions where water is already scarce will face serious difficulties and growing costs. In southern Spain, the process of desertification is likely to accelerate. Hotter summers and water scarcity could hit tourism throughout southern Europe, while further north, in winter tourist resorts, lack of snow could force many ski slopes to close (a rise of 1 degree is estimated to mean that a quarter of Alpine ski slopes will no longer have snow, a further rise of 1 degree would increase the proportion to 40%).

Demography: Europe's changing population

Europe's population is still growing, but is projected to start declining by around 2023[11]. In 2005, only 300 000 more people were born in the EU than died, giving a natural population growth rate of less than 0.1%, one-tenth the rate in the US. According to the latest projection, deaths will outnumber births in the EU from 2008 onwards, leading to a natural decline in the population.

From then on, population growth will depend on immigration. This is already the main source of population growth in the EU. Between 2000 and 2005, 86% of population growth was due to migration, compared to only 42% in the US. If migration trends remain the same, EU population will start to fall in around 15 years time, unless there is a pick-up in the birth rate.

The economic and social impacts of demographic change

Demographic change will gradually limit the scope for future employment growth. Although the population of working age (aged 15–64) is already expected to decline from around 2011 onwards, total employment in the EU-25 is expected to continue growing up to around 2017 due to rising labour force participation. Thanks to higher education levels and greater labour force participation of younger cohorts of women, female employment rates are projected to rise from just over 55% in 2004 to almost 65% by 2025, assuming, of course, a counterpart growth in jobs. The employment rates of older workers are also projected to increase, from 40% in 2004 for the EU-25 to 47% by 2010 and 59% in 2025. From around 2017 onwards, however, in the absence of an increase in net inward migration, the shrinking working-age population could lead to the number in employment remaining unchanged and, subsequently, to it declining. Productivity growth will then become the only source of economic growth.

Overall, three phases can be distinguished:

- Between 2004 and 2011, there is scope for significant employment and economic growth as both the population of working age and participation rates are expected to increase.

- Between 2012 and 2017, rising participation rates can offset the decline in working-age population resulting from the baby-boom generation entering retirement and being replaced by much smaller numbers of young people becoming of working age. The overall number of people in the work force in the EU could continue to increase, though at a slower rate and this period could be characterised by tightening labour market conditions.

11 According to Eurostat's baseline population projection at Member State level 2004–2050.

Demographic challenge in Bulgaria

Among the EU Member States, Bulgaria is in a particularly challenging demographic situation. At the end of 2005, the total population was 7.7 million and is expected to decline significantly by 2050 as a result of a low birth rate, high adult mortality and a high level of net emigration. This has led to population decline of 5.4% between 2000 and the end of 2005. The old-age dependency rate was 44.5% in 2005. Projections of Bulgaria's future old-age dependency rate are significantly higher than the EU average (61% compared to the EU average of 53% in 2050), which will have a major effect on the long-term sustainability of pensions.

The rapidly increasing share of those aged 65 or older has implications for social inclusion. The at-risk-of-poverty rate among this age group increased to 16% in 2004 from 14% in 2003. In addition, life expectancy at birth in 2004 was 76.2 years for women and 69 years for men) both significantly below the EU averages. Infant mortality was more than double the EU average in 2004 (11.6 per 1000 live births as against 4.5), though it has declined significantly from 27.3 in 1970.

- After 2018, the ageing effect will dominate. By then, the cohort trend towards higher female participation rates will more or less have come to an end putting even greater pressure on measures to increase participation of women as well as on measures to increase the participation of older workers to raise the effective retirement age. Consequently, the declining number of people of working age can then be expected to result in a decline in total employment and lower prospects for economic growth, though not necessarily of growth in GDP per head.

Changing migration patterns in EU Member States …

In the five years 2000–2005, the Member States experiencing the largest net inward migration (i.e. immigration less emigration) were the three cohesion countries in the south of Europe, Spain, Greece and Portugal plus Italy, countries where immigration had previously been relatively low. In Spain migrants added over 8% to population over this period, while in the other countries, they added over 3%. Inflows were also relatively high in Cyprus as well as in Ireland, in both of which the shares of foreign-born residents was already relatively large (above 10%). By contrast, net migration into Germany, France and the UK, in which foreign-born population shares were also high, amounted to less than 2% of their population (Fig. 1.21).

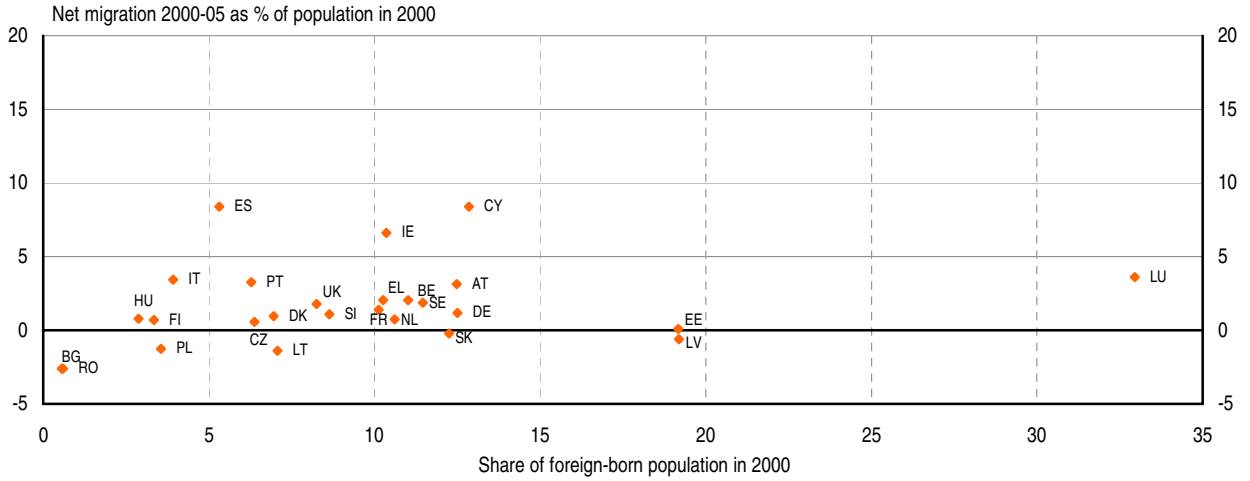
The difference between the US and the EU in terms of the share of foreign born residents is not that large (Fig. 1.22). In 2000, the US share of foreign born residents was 11%, in the EU-27 it was 8% and in the EU-15 it was 11%. As the EU-27 has a larger population than the US, the total number of foreign born residents is actually higher in the EU.

Because the US is a single country and the EU consists of 27 countries, it is arguable that those born in other EU Member States rather than in third countries should be excluded from the comparison to make it meaningful. This amounts to around 2% of EU population. This lowers the proportion to 6% for the EU-27 and 8% for the EU-15. However, moving from New York to California is quite different from moving from Portugal to Finland, not only because of the difference in language but also because of far greater cultural differences. Within the EU, there are only a few Member States with more people born in other parts of the EU than in countries outside the EU, Belgium, Luxembourg and Ireland being the most prominent.

The most striking difference between the US and the EU is how foreign-born residents are distributed. In the US, they are concentrated in the two main States of entry, California and New York, where 25% and 20% of the population, respectively, was foreign born in 2000. In contrast, in the EU, there are only three small countries with very large shares, Luxembourg (33%) and Estonia and Latvia (19% in each). In the EU, in four out of five Member States, those born abroad represented between 5% and 15% of the population in 2000[12], whereas this is the case in just two out of five US States. Foreign-born residents were, therefore, more dispersed in the EU than in the US.

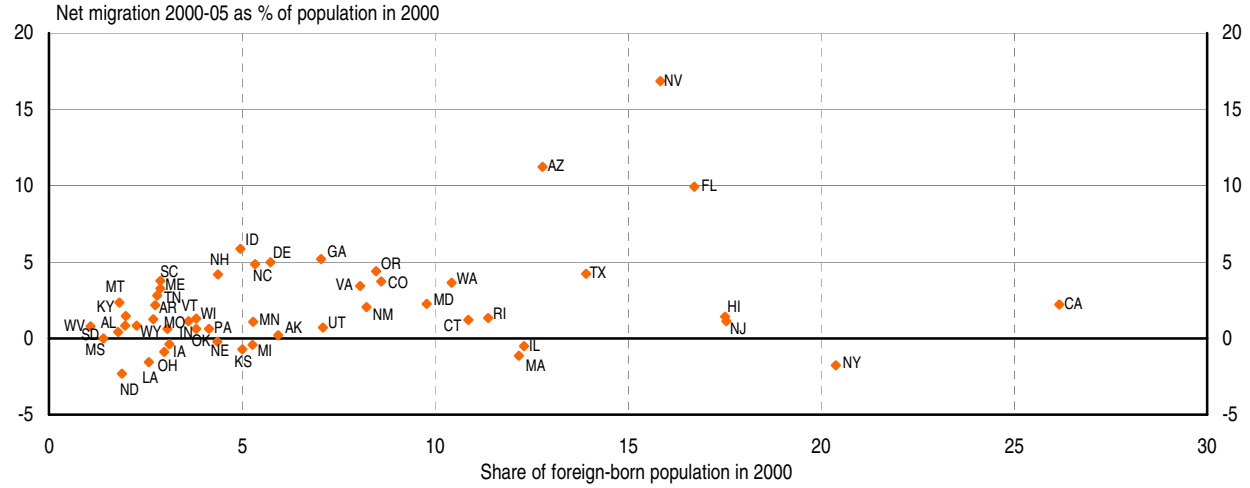
12 The source of these data is the Census of Population in most countries, as a result more recent data are not available.

1.21 Net migration and foreign-born population in the EU, 2000-2005



Source: Eurostat and OCDE

1.22 Net migration and foreign-born population in the US, 2000-2005

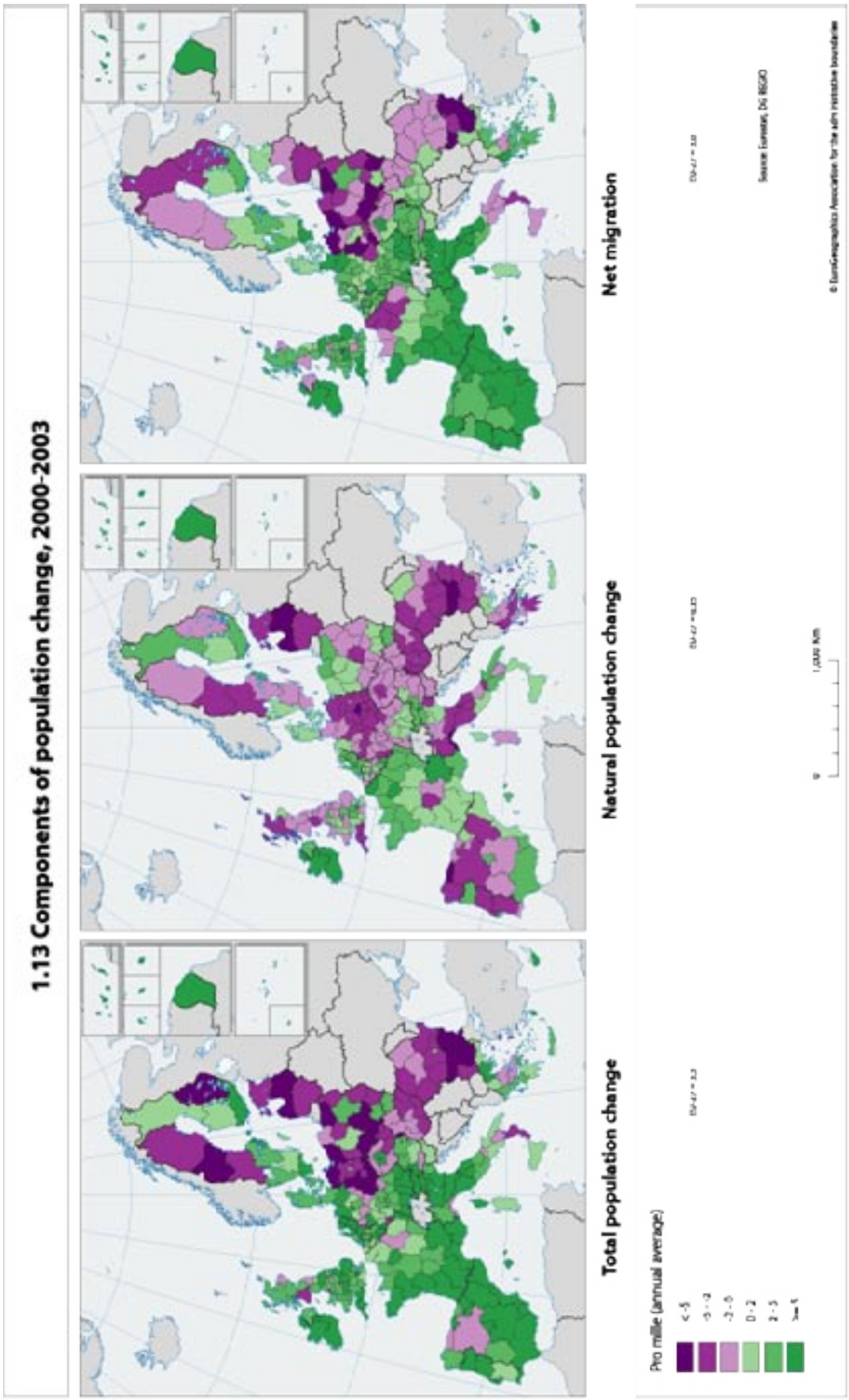


Source: US Census Bureau

Overall, if migration between Member States is included, net inward migration into EU25 Member States was much the same as into the US over the period 2000 to 2005 (adding 2.1% to population over the five years as against 2.3%). Migration into EU-15 Member States was higher than into the US, Net inward migration, however, varies considerably across the US, adding over 10% to populations in Nevada, Arizona and Florida over the period, more than in any EU country. Only in Spain, Cyprus and Ireland did net migration add over 6% to population and in all other Member States, the figure was under 4%.

… And at regional level

Migration has also been the main factor responsible for differential rates of population growth across EU regions. Some77 NUTS 2 regions in all experienced net outward migration over the period 2000–2004, the highest rates (0.5% a year or more of population) being in eastern Germany, Poland and Bulgaria. Outflows were also significant (0.2% a year or more) in southern Italy, northern France, northern and eastern Finland and a few parts of the north of the UK (North-Eastern Scotland and Tees Valley & Durham) (Map 1.13).


1.13 Components of population change, 2000-2003
Total population change
Natural population change
Net migration
Pro mille (annual average)
< -5
-5 - -3
-3 - -1
0 - 2
2 - 3
3 - 5
> 5
0
1,000 Km

By contrast, 68 regions experienced net inward migration of over 0.5% a year over these four years and 34 regions, of over 0.8% a year. Eleven of these were in Spain, 7 in northern and central Italy, 5 in the UK and 4 in the south of France. They also include a number of island regions — Cyprus, Malta, Canarias, Illes Balears and Corse (see Box on island regions).

Economic factors in the form of differences in income levels and employment tend to be the main factors inducing people to move between regions. In Germany, all of the new Länder in the east have experienced a net outflow to the western Länder since the early 1990s, reflecting the substantial gap between the two in terms of income and employment levels. In Italy, migration still tends to be from the less prosperous south to the more prosperous north. In France, people have moved away from the old industrial regions in the North, such as Nord-Pas-de-Calais or Lorraine, to the south.

Capital cities, as centres of economic activity have also seen significant inward migration. Indeed, this is true in virtually all countries, the migrants in question coming both from other regions in the country concerned (as in the case, particularly, of Helsinki, Stockholm and the capital cities in all the new Member States) and from third countries (as in the case of Madrid and Rome), as well as from other parts of the EU (as in the case of Brussels and Vienna).

Non-economic factors, however, in particular, the quality of life and the attractiveness of the environment, seem to have an increasing effect. The regions concerned include a number with relatively low levels of GDP per head, such as Cornwall in the UK, Ionia Nisia and Peloponisos in Greece, Canarias in Spain and Algarve in Portugal.

Natural growth is slowing down throughout the Union

The significant reduction in fertility rates (the average number of children per woman declined from an average of 2.5 in the EU in 1965 to 1.5 in 1995), which underlies the slow-down in population growth, began in the 1960s in northern Europe and spread some 10 years later to the southern countries and some 20 years later to central and eastern countries. The same trends are, therefore, evident in all parts of the EU[13]. Nevertheless, there are substantial differences between regions in both the direction and scale of population change.

Over the period 2000–2004, just under half (119) of the NUTS 2 regions in the EU experienced natural growth of population. In 30 of these regions, growth was over 0.4% per year — 11 in France, four in Spain, five in the Netherlands, three in the UK (inner, outer London, Berkshire, Buckinghamshire and Oxfordshire, and Northern Ireland), both regions in Ireland and one each in Sweden (Stockholm) and Austria as well as in Cyprus.

By contrast, the natural population decline was 0.2% a year or more in 71 regions spread across the EU,

Islands

There are 16 island regions in the Union with an overall population of around 9.5 million, 70% of them in Sicilia and Sardegna. On average, GDP per head in 2004 was well above that of the lowest income regions in the EU, but (with the exception of Illes Balears, Åland and Gotlands lan) lower than the EU average. In general, there has been a slow convergence of GDP per head towards the EU average between 1995 and 2004, though for some of these regions (Bornholm, Sicilia, Sardegna, Gotlands län, Orkney Islands and Shetland Islands) the gap has widened. These are the same regions (together with the island of Eilean Siar), which have experienced population decline over this period.

Though accessibility often constitutes a particular problem for islands, insularity does not seem to constitute in itself a major obstacle to development. What seems to determine their long-term development prospects is rather their size of population, which in many cases is too small to support a reasonable level of infrastructure and basic services.

13 See, Communication from the Commission, Green Paper "Confronting demographic changes: a new solidarity between generations" COM (2005) 94, 16 March 2005.

1.5 Natural change in population and net migration, 2000-2003

Group	Total population change	Natural population change	Net migration	Total population in 2004 (thousand)	% of EU population	Average Annual			Number of Regions
						Total population change	Natural population change	Net migration	
1	Population growth	Positive	Positive	174 056	36	0.9	0.3	0.6	88
2		Negative	Positive	129 123	26	0.4	-0.1	0.5	78
3		Positive	Negative	49 585	10	0.3	0.4	-0.2	18
4	Population decline	Negative	Positive	39 673	8	-0.6	-0.2	-0.3	25
5		Positive	Negative	23 074	5	-0.2	-0.3	0.2	13
6		Negative	Negative	73 113	15	-0.2	0.1	-0.3	46

Source: Eurostat, DG REGIO calculations

as result primarily of very low fertility rates. In 16 regions, the natural decline was over 0.4% a year — in four regions in eastern Germany, three in Hungary, almost all the regions in Bulgaria and in Liguria in Italy, Asturias in Spain, Alentejio in Portugal and Latvia

Northern, sparsely populated regions

Four regions in the EU have less than 8 inhabitants per square kilometre: the two Swedish regions of Mellersta Norrland and Övre Norrland and the two Finnish regions of Itä-Suomi and Pohjois-Suomi.

The main problem they face — other than remoteness and cold climate — is depopulation, caused by a low birth rate and outward migration, partly reflecting economic growth in the rest of the country, which encouraged people — particularly the young — to move elsewhere. Over the period 1995–2004, population decline was particularly marked in the Swedish regions and Itä-Suomi in the East of Finland. Population projections for the period 2002–2020 suggest that these trends will continue, with Northern and central parts of Finland forecast to lose at least 15% of their population over this period.

With the exception of Itä-Suomi, these regions had a higher GDP per head than the EU average in 2004, though it was declining in the Swedish regions. All regions have unemployment rates above the national average. The regional economy is strongly dependent on the public sector and the rate of business creation is especially low.

Overall population change and the underlying factors

More than 60% of all regions (covering 72% of EU population) experienced an increase in population over the period 2000–2003. In around half of these, the increase was due to both natural population growth and net inward migration. These regions (Group 1 in the table) include most of the regions which include the capital city and other higher income regions in Member States — in, for example, southern Germany the North-East of Italy and in the South and East of Spain. They also include, however, most regions in France and a few less prosperous parts of the UK (Greater Manchester and East Wales) (Table 1.5).

In one in four regions (covering 26% of the EU population), natural population decline was more than outweighed by net inward migration. These regions (Group 2 in the table) include most regions in western Germany and the UK, northern and central Italy and Spain, Slovenia, central and southern Portugal and several regions in Greece. In a further 8% of regions, the reverse was the case, natural growth of population outweighing net outward migration (Group 3). These are mainly in southern Italy, north and west of France and northern Finland.

One in three regions experienced population decline; in the majority this was due to natural population reduction and net outward migration (Group 6). These regions are mainly in the new Member States — in Bulgaria, Romania, Poland, Latvia, Lithuania, and several parts of the Czech Republic, Hungary and

Slovakia, but also in eastern Germany and the North of Sweden (see Box).

Continuing shifts in the age structure of the population

This variation in population growth across regions has implications for the age structure and, in particular, the relative number of people of working age who effectively have to support young people, on the one hand, and older people, on the other.

The number of young people under 15 has declined continuously over the past decade in relation to the number of people of working age (15–64), reflecting the fall in fertility rates. This decline has been particularly marked in the three EU-15 cohesion countries and the new Member States. Whereas in all the new Member States in 1995, there were more young people in relation to population of working age than in the EU-15, in 2005, this was the case only in Cyprus, Malta and Lithuania. While this means that there are fewer young people for those of working age to support, it also means that there are fewer coming along to support the older generation in future years.

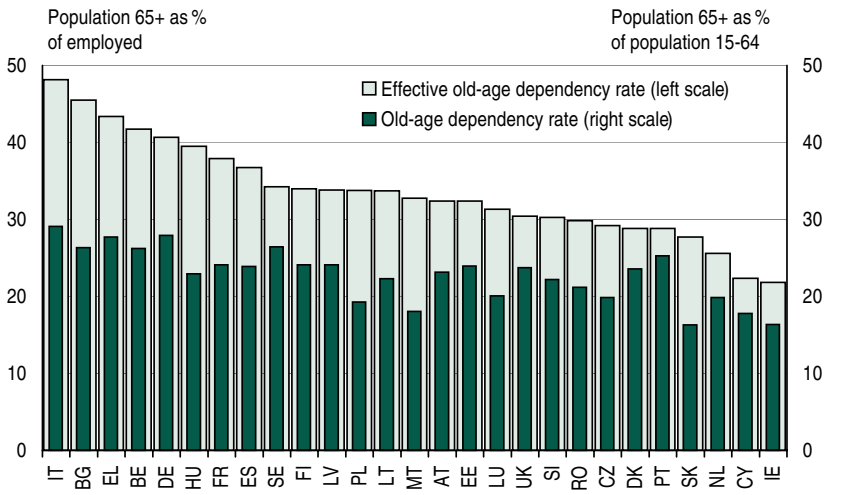
The number of older people of 65 and over amounted, on average, to some 28% of the number of people of working age in Germany and Italy in 2004, implying that there were less than 4 people aged 15–64 for every one person of 65 and over (Fig. 1.23). In many regions (78 of the 268), the proportion — the so-called dependency rate — was higher than this, exceeding 40% in Mellersta Norrland in Sweden, Åland in Finland and Liguria in Italy. At the other end of the scale, the dependency rate was only just over 16% in Ireland and Slovakia and under 13% in Flevoland in the Netherlands as well as in the two French DOMs of Guyane and La Reunion (see Box on ultra-peripheral regions).

Although the dependency rate is intended to give an indication of the burden of support for those in retirement falling on the population of working age, it leaves out of account the significant number among the latter who are not actually working. As such, it tends to understate the extent of dependency, in the sense that support — in terms of income at least — effectively falls on those in employment rather than on everyone aged 15–64. The dependency rate as usually measured also fails to draw attention to the importance of raising the proportion of working-age population in employment as a means of reducing the average burden of support.

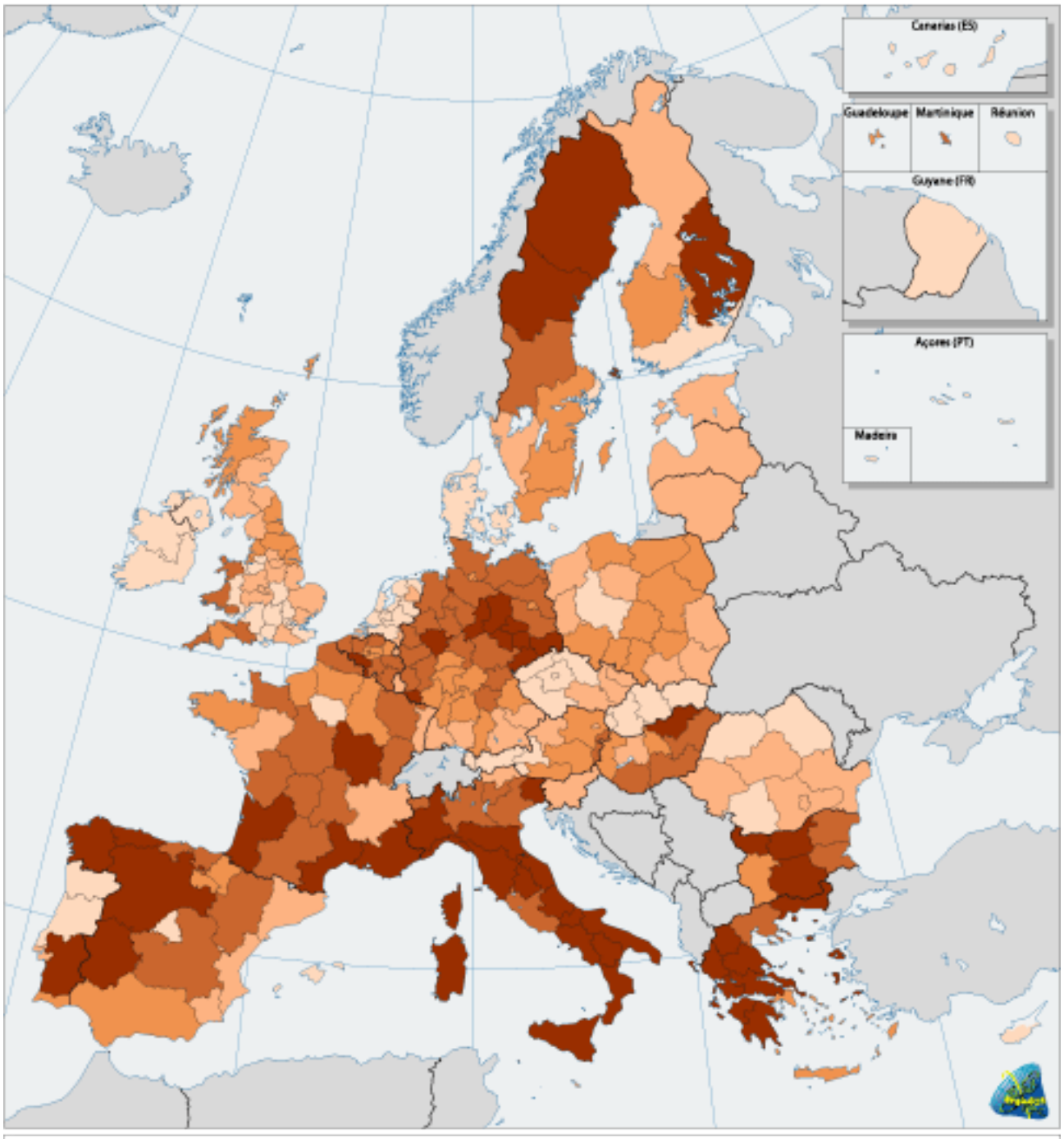
Differences across regions in the number of people of 65 and over in relation to the number of people in work are much wider, reflecting the substantial variation in employment rates as much as in the relative number above retirement age. In Italy and Bulgaria, therefore, this effective dependency rate averages over 45% (large numbers not working combining with large numbers of older people), while in the Netherlands, it averages only 25% and in Ireland, just 22%.

At the regional level, the variation is even more marked (see Map 1.14). Large parts of Spain, Italy and Greece have an effective old age dependency rate of close to 50%, meaning that for every person above retirement age there are only around

1.23 Old-age dependency rates, 2005



Source: Eurostat



1.14 Effective old-age dependency rate, 2005

Inactive population aged 65+ / total employed (%)

- < 29.51
- 29.51 - 34.50
- 34.50 - 38.85
- 38.85 - 45.71
- >= 45.71
- no data

EU-27 = 36.4

Source: Eurostat

0 500 Km

two people in employment. In five regions — Liguria and Molise in Italy, Voreio Aigaio in Greece, Corse in France and Severozapaden in Bulgaria — the rate is over 60%. On the other hand, in Stockholm, largely because of the high level of employment, it is under 20% (this is also the case in Guyane because of the age structure of the population).

High effective dependency rates are, therefore, primarily associated with low employment rates as well as a large proportion of the population beyond retirement age. As this proportion continues to increase, as it will in future years, it will become ever more important to increase the number of people in work. This implies not just encouraging those at present not working to do so but making it more possible for them — women in particular — to combine employment with other responsibilities, especially caring for children. It also implies ensuring that there are sufficient jobs for them to do.

Territorial trends at more local level

Cohesion is not confined to avoiding excessive disparities across the EU as a whole or between regions within countries but extends to minimising those which exist within regions, especially between urban and rural areas or between towns and cities of different sizes. Although the areas concerned may seem simple to identify, they are hard to define. Cities, for example, can be viewed as physical, administrative or economic entities but the boundaries implied by each of these may differ significantly.

The analysis here concentrates on cities with more than 100,000 inhabitants. It is based on the Urban Audit, which has identified 501 such cities in the EU-27 which are home to around 36% of the population[14]. Smaller towns or cities with between 5,000 and 100,000 inhabitants (here termed 'towns') have been defined on the basis of urban morphological zones as distinguished by the CORINE land cover survey. Around 23% of the population in the EU live in such towns. According to the OECD definition, 21% of the population in the EU live in predominantly rural areas and another 37% in intermediate rural areas (both defined at the NUTS 3 level). As each of these three entities is defined on a different basis and scale, they will overlap, and thus they cannot be directly compared.

To overcome this problem and to give an insight into their prospects for economic development, areas can be classified on a NUTS 3 basis in terms of their accessibility to a city with more than 100,000 people, where a range of essential services can be expected to be found[15]. This indicates that more than 90% of intermediate rural regions are accessible in this sense

Ultra peripheral regions

Ultra-peripheral regions are characterised by remoteness from the main EU market, narrow domestic markets, often fragmented across a number of islands, which limits economies of scale, undeveloped labour markets with few skilled workers, and fragile ecosystems. Despite this, economic growth in some ultra-peripheral regions has been significant l in the recent years, while in others, significant problems remain in overcoming structural weaknesses.

The Canarias have recorded growth comparable to that in mainland regions, while the Açores and Madeira have experienced large-scale emigration, low unemployment and the continuing importance of agriculture and fishing. The French ultra-peripheral regions, in turn, have had high population growth, very high rates of unemployment, and a large and undiversified service sector.

As a consequence, with the notable exception of Madeira and the Canarias, the ultra-peripheral regions have among the lowest levels of GDP per head in the EU as well as in the respective countries to which they belong.

14 The Urban Morphological Zones (UMZ) with more than 100,000 inhabitants gives an almost identical share of EU population living in these. The number of UMZs, however, is considerably smaller, only 381, because the methodology used tends to cluster neighbouring cities into one large UMZ and it also misses some of the cities identified in the Urban Audit. On the other hand, it seems to overestimate the population in a number of cases.

15 A region is classified as accessible if more than 50% of the population can reach a city with more than 100,000 people in less than an hour. This cut-off point is somewhat arbitrary, and in the Nordic regions, for example, cities with considerably fewer people provide a wide range of services. Nevertheless, in practice, reducing the size of city does not alter the results of the analysis dramatically.

Methods used to define cities, small and medium-sized towns and rural areas

Cities of more than 100,000 — Cities with more than 100,000 inhabitants are taken from the Urban Audit which defines both a political boundary the "core city" and an economic boundary the "larger urban zone":

- the core city, in most cases, corresponds closely to both the administrative and the physical or morphological boundary. In a few cases, the political boundary may be smaller than this;
- the larger urban zone approximates to the commuter area or to a single labour market. The aim is to include all local areas (at the LAU2 level) in which at least 20% of people commute into the core city or surrounding local areas. Local areas where commuting is less than this but which are surrounded by areas where it is more are also included. In conurbations such as the Ruhrgebiet, one larger urban zone might cover more than one core city.

The advantage of this approach is that because it corresponds with administrative units there is usually a substantially amount of data available. The drawback is that in some cases, the cities so defined do not correspond with physical or economic boundaries.

Small and medium-sized towns of 5,000–100,000 — Urban morphological zones (UMZ) as created by the European Joint Research Council are defined as CORINE land cover cells of 100 squares meters which are built up areas less than 200 metres apart.

Port areas, airports, and sport and leisure facilities are also included if they are contiguous with these areas. Road and rail networks, and water courses, if they within 300 m of the UMZ, are also included

The advantage of this concept is that it is based on a uniform definition throughout the EU. The drawback is the almost complete lack of data for the areas defined.

Rural Areas — The OECD definition distinguishes two hierarchical levels of territorial unit: local and regional.

- At local community level (LAU2), the OECD defines rural areas as communities with a population density below 150 people per square kilometre.
- At regional level (mainly NUTS 3), the OECD distinguishes larger functional or administrative units by their degree of rurality, defined in terms of the share of population living in rural communities. Regions are then grouped into three types:
  - predominantly rural regions: over 50% of the population living in rural communities;
  - significantly rural regions: 15 to 50% of the population living in rural communities;
  - predominantly urban regions: less than 15% of the population living in rural communities.

The advantage of this approach is that it enables all areas to be defined in a simple way and is used internationally. It also means that data available at the NUTS 3 level can be used.

The drawback is that the LAU2 and NUTS 3 regions vary widely in terms of land area which can bias the results. For a country, like Sweden, with very large LAU2s, this method will tend to overstate the number of rural areas. For countries, like Germany, with small NUTS 3 regions, the number of rural areas will also tend to be overstated and some might even be directly adjacent to, or surround, an urban area.

and some two-thirds of predominantly rural regions (see Box on Methods).

Large European cities: growth, decline and suburbanisation, 1996–2001

Two-thirds of cities in the EU experienced growth of population over the 5 years 1996–2001, while the remaining third experienced a decline[16].

There was a major trend towards suburbanisation. In 90% of urban agglomerations, population in the suburbs grew by more than in the core city. In only a few cases — such as Lefkosia, Copenhagen, Brussels, London and Ljubljana — did population in the core expand by more than in the suburbs and in a significant number, population in the core declined despite growing overall. Moreover, even where population declined overall, there were only a small minority of cities where there was also suburban decline. This, however, was the case in many second-tier cities where heavy industry is, or used to be, located (such as Glasgow, Newcastle, Manchester, Liverpool, Sheffield, Birmingham in the UK, Bremen in Germany, Łódź, Katowice, Bydgoszcz in Poland, Ostrava in the Czech Republic, Miskolc in Hungary, Liepaja in Latvia, Maribor in Slovenia, and Brăila, Sibiu, Călăraşi, Giurgiu and Alba Iulia in Romania). Relative decline of population in the core coupled with growth in the suburbs was particularly marked in Dublin, Lisbon, Berlin, Munich, Vienna, Rome, Athens, Prague, Bratislava, Budapest and Warsaw[17].

There is evidence that population growth in the suburbs is being accompanied by the suburbanisation of economic activity. In 16 of the 20 cities in which GDP can be measured at NUTS 3 level in the core and suburban areas, the share generated in the latter increased between 1995 and 2003, in some cases, substantially, especially in the new Member States (in Budapest, Prague, Sofia and Warsaw), though also in Munich.

Population growth around second tier cities with population loss in the centres is evident in most cases in Austria, Poland, Slovakia and Italy. This was also case in cities in eastern Germany, while in the western part, suburban population growth was associated with either little change in the centre or some increase.

Suburbanisation and the growth in economic activity means increasing pressure on the environment often accompanied by decline in the centre, with shops and other businesses closing down. This calls for effective management of land-use and public transport as well inner-city renewal to slow down or even reverse the trend.

Concentration of deprivation in urban neighbourhoods

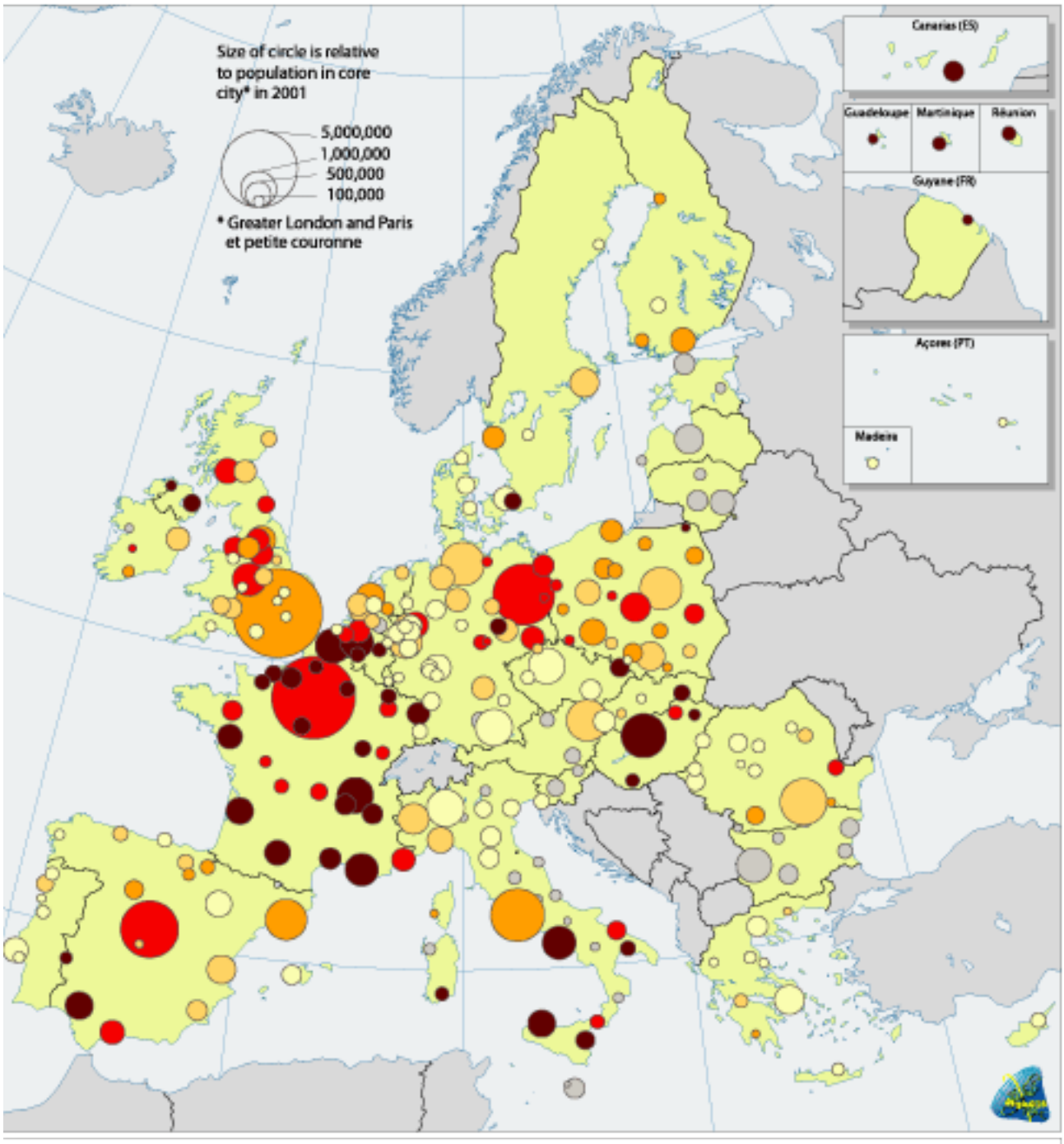
In 75% of the Urban Audit cities, employment rates are lower than in the country as a whole, reflecting the fact that many of those working there commute from outside while many residents especially those with low levels of education do not have jobs. A significant proportion of the people concerned are foreign-born, migrants and ethnic minorities in general tending to concentrate in inner city areas in many parts of the EU. In addition, the evidence indicates that even those migrants with higher levels of education have more difficulty in finding employment than the rest of the population.

Low employment rates in inner city areas are reflected in high rates of unemployment. In many cities across the EU, not only are unemployment rates high but there are huge disparities in rates (Map 1.15). Disparities are particularly large in France, Belgium and Southern Italy, in cities like Marseille or Catania, as well as elsewhere, such as in Pecs, in Hungary, where the highest unemployment rate (55.6%) in 2005 was nearly 10 times the lowest (6.2%), Košice in Slovakia, Derry in the UK or Malmö in Sweden.

In some cities, the highest concentrations of unemployment are in central areas, such as East London, while in others, they are in the outskirts, for example in large housing estates built 20 or 30 years ago or more. In these areas, there is not only high unem-

16 Based on Urban Audit data (core cities and suburbs).

17 In Bratislava suburbanisation extended across the Austrian border.



1.15 Unemployment disparities in inner city areas, 2001

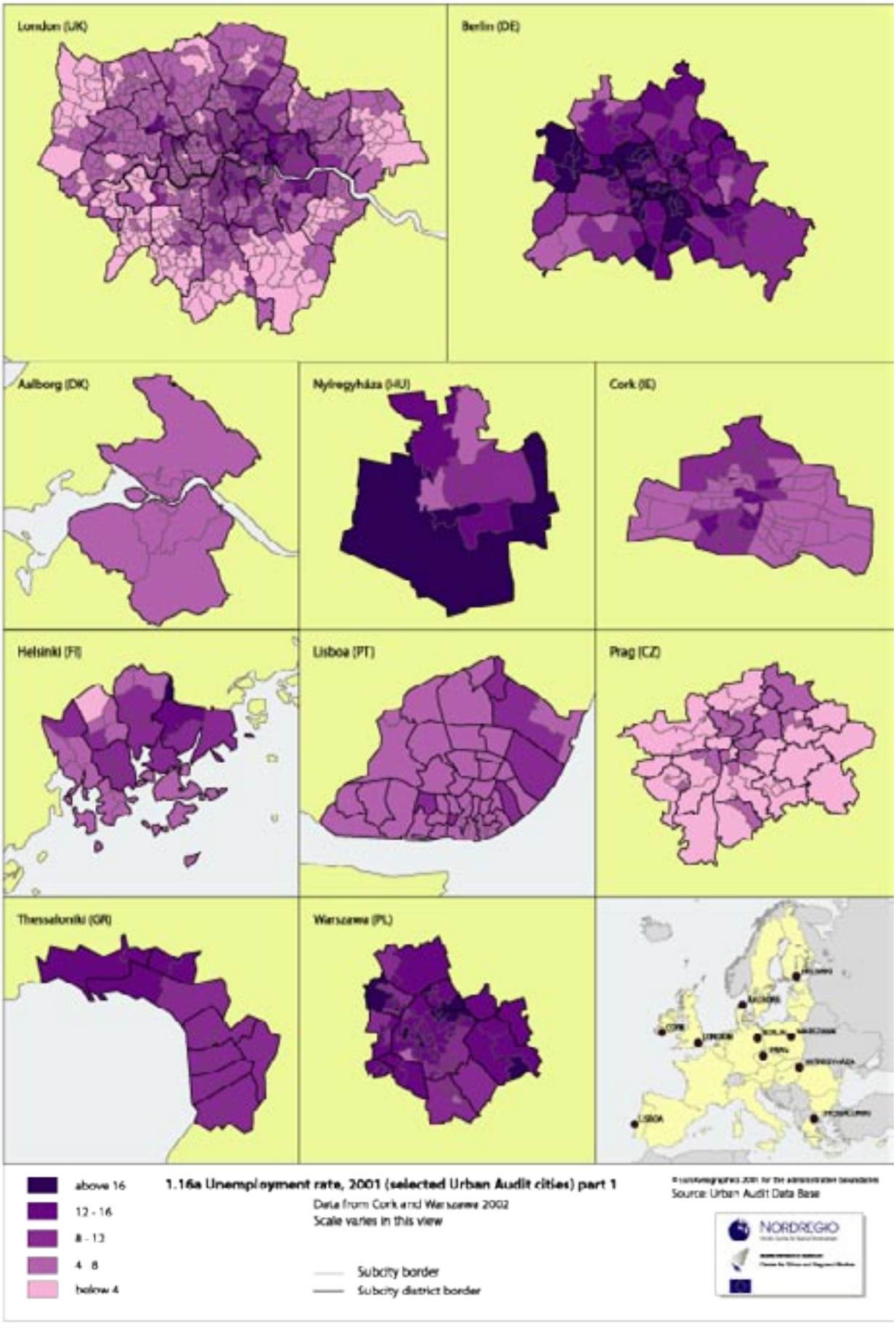
Standard deviation of neighbourhood unemployment rates 2001 annual average 1996-2001, in %

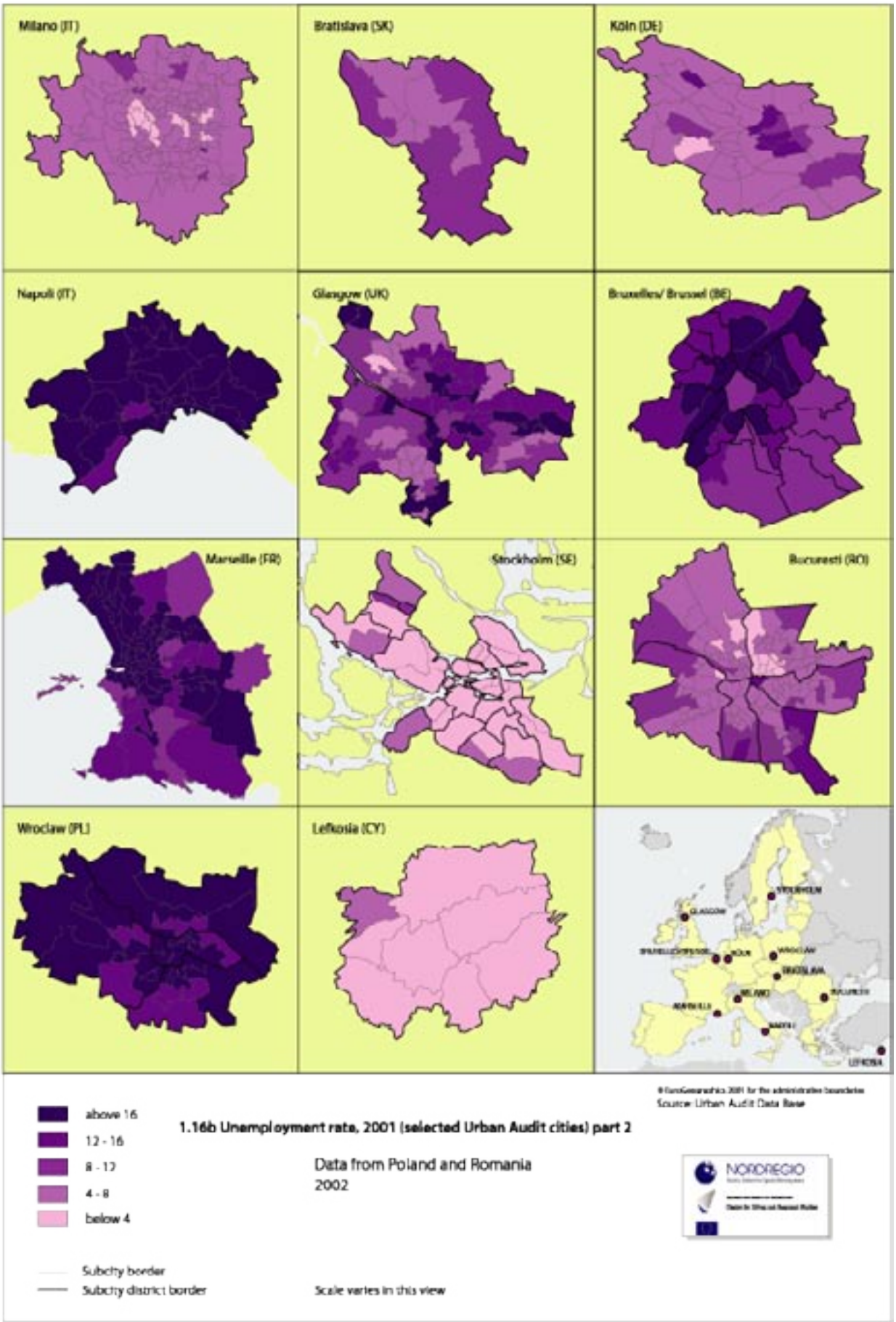
- Very large neighbourhood differences (StdDev 5.36 - 15.97)
- Large neighbourhood differences (StdDev 3.68 - 5.35)
- Average neighbourhood differences (StdDev 2.79 - 3.67)
- Small neighbourhood differences (StdDev 1.89 - 2.78)
- Very small neighbourhood differences (StdDev 0.29 - 1.88)
- Data not available

Source: Urban Audit Data Base

Data from Spain 1991 (Madrid 1996); France 1999; Ireland, the Netherlands, Poland and Romania 2002. Data partly available from Austria, Germany, Italy, the Netherlands and Slovenia. Data not available from Bulgaria, Estonia, Latvia, Lithuania and Malta.

0 500 Km


London (UK)
Berlin (DE)
Aalborg (DK)
Nyíregyháza (HU)
Cork (IE)
Helsinki (FI)
Lisboa (PT)
Prag (CZ)
Thessaloniki (GR)
Warszawa (PL)
above 16
12 - 16
8 - 12
4 - 8
below 4
1.16a Unemployment rate, 2001 (selected Urban Audit cities) part 1
Data from Cork and Warszawa 2002
Scale varies in this view
Subcity border
Subcity district border
Source: Urban Audit Data Base
NORDREGIO



1.16b Unemployment rate, 2001 (selected Urban Audit cities) part 2

1.6 Urban and rural regions by population change, GDP per head and economic growth, 1995-2004

Percentage of NUTS 3 regions with:	Predominantly urban	Intermediate rural	Predominantly rural	All
- growing population, 1995–2004	61	70	54	62
- GDP per head (PPS) 2004 > EU-27 average	71	34	23	43
- growing GDP per head relative to EU-27 average, 1995–2004	36	39	43	39
Number of regions	407	441	361	1,209
Total population (million)	202.4	172.8	82.1	457.3
% of EU-27 population	44.3	37.8	17.9	100.0

Source: Eurostat and calculations DG REGIO

ployment but other aspects of deprivation, such as low quality housing and inadequate public transport and other services as well as low income levels and high crime rates.

High concentrations of unemployment in particular areas, however, are not limited to large cities but can also be found in smaller cities of under 250,000 people (Maps 1.16a and 1.16b).

Rural areas

Significant outward migration from rural areas is still the prevailing trend in large parts of the EU, with damaging effects on their prospects for economic development. This is the case in rural areas in the South of Italy, the North of Finland, Sweden and Scotland, Eastern Germany and in the eastern parts of Poland and others new Member States). The lack of suitable jobs and lower living standards drive people, especially the young and better-educated to move elsewhere This has cumulative effects on the areas concerned, leaving them with an ageing population, shrinking basic services and even fewer employment possibilities. Predominantly rural areas in the EU, therefore, have relatively high youth unemployment rates (17.6% on average), natural population decline and a large proportion of elderly people (17% being 65 or over).

Despite these general trends, as noted above, people are leaving cities in many countries and there is net inward migration into a significant number of rural areas. Among the three OECD categories of region, the highest population growth is in intermediate rural areas (0.34%) as a result of the extent of migration flows (adding 1.4% a year to population). While young people are moving to urban areas to work or to university, people who are slightly older are moving to more rural areas to live and sometimes to work. In several parts of France and the UK, this has led to the revival of more remote rural areas as well as those closer to cities.

This general picture conceals a more complex pattern of development. Many intermediate rural areas are characterised by industrial restructuring (or the need for it), high unemployment and population and economic decline, while there are examples of predominantly rural area with growth in almost every respect — population, employment and GDP — including some of the more remote areas. Although only 23% of predominantly rural areas have GDP per head above the EU average, growth of GDP over the period 1995–2004 exceeded the average in 43% of them as against 36% of urban and 39% of intermediate regions. Rural areas, therefore, cannot automatically be associated with decline or intermediate areas with expansion. Nevertheless, in the lower income Member States, urban-rural differences in income levels and deprivation tend to be greater and unemployment higher in rural areas than elsewhere[18] (Table 1.6).

18 European Foundation for the Improvement of Living and Working Conditions (EFILWC, 2006).

While employment in agriculture is still higher in rural areas than in other parts, agriculture is no longer the main driver in the economy. Between 2000 and 2005, employment in agriculture in the EU25 declined from 5.7% to 4.9%, though it remains high in a number of Member States (Romania, 32%, Poland over 17%; Lithuania 14% and Latvia; Greece and Portugal, around 12%).

Employment in agriculture is almost certain to decline in future years, especially in the new Member States. Outward migration could well accelerate the process, especially in peripheral areas in the East. This could lead to the rationalisations of holdings, giving rise to further job losses, adding to the incentive to migrate and resulting in possible abandonment of land.

The major challenge is to diversify the rural economy to replace the income and jobs in agriculture as the sector continues to decline and to make the most of the inherent comparative advantages of rural areas which are linked to a large extent to the natural environment.

This applies, in particular, to remote and disadvantaged areas. Case studies show that nature conservation in such places is not only beneficial in itself but is a means of creating and supporting employment in areas where job employment opportunities and the scope for diversification are limited. It is also a means of encouraging tourism which is likely to create even more jobs[19]. Effective management of the natural heritage is, therefore, an important requirement for economic as well as environmental reasons (see Box on mountain areas).

Employment creation can also come from increasing renewable energy sources, from the production of biomass and the processing of biofuels, which regions with fertile agricultural areas and large forest areas are well suited for.

Cultural identity, local traditions and historical heritage can also contribute to rural development, though the key is to recognise the commercial potential of these aspects and be able to realise this. Newcomers moving into rural areas may be able to do this by bringing new ideas and business know-how. In more remote areas, however, more people tend to be leaving than entering, which might put this potential at risk.

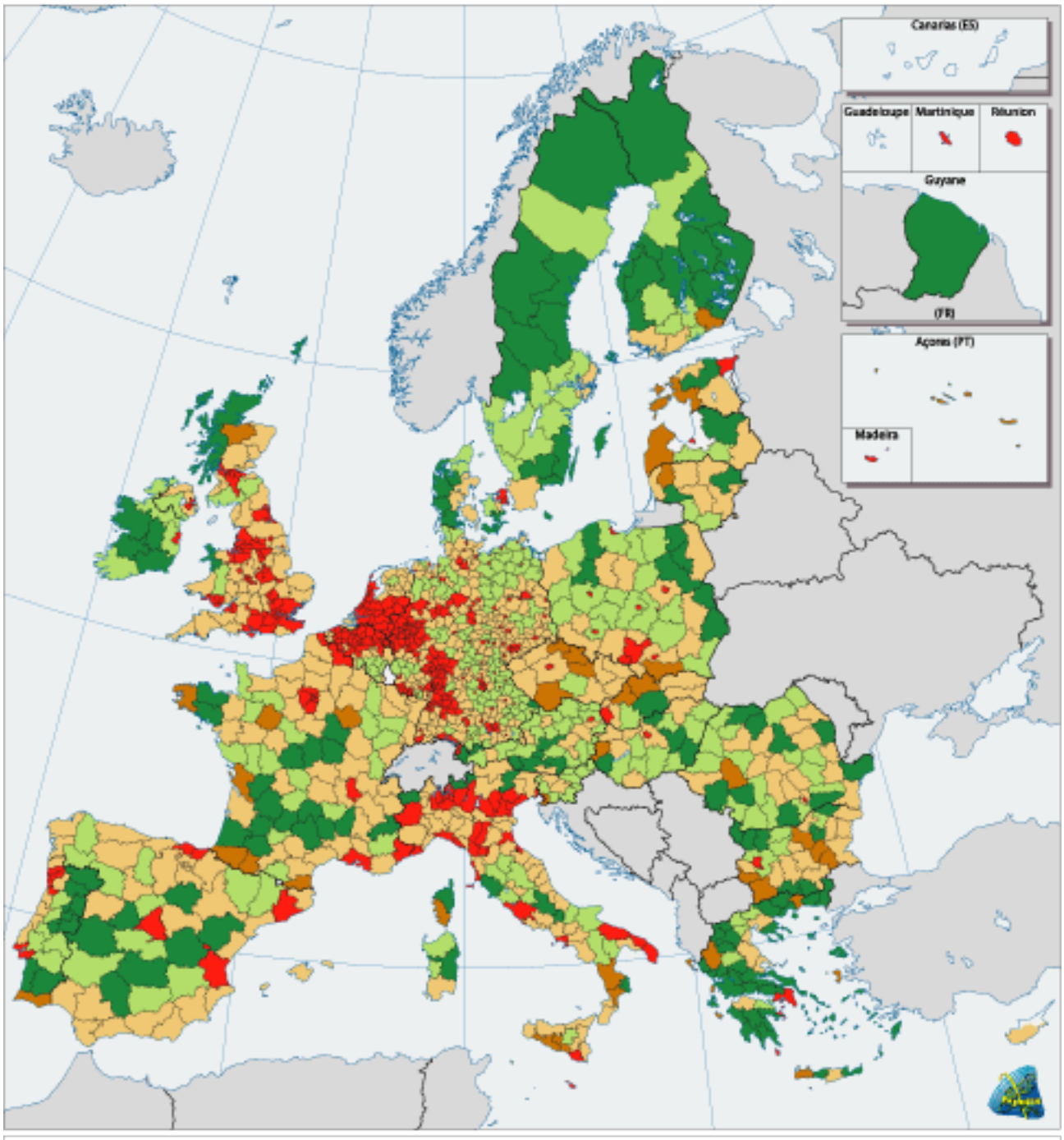
Public service provision is crucial for both individuals living in rural areas and businesses operating there. Fixed service points providing access to basic public, financial and other services are an innovative way of ensuring provision. Such points may take various forms, such as rural transaction centres, one-stop shops, multi-service centres or mobile service points. Scottish experience shows that these can offer a solution to problems not adequately addressed by existing arrangements, such as tackling social deprivation as well as providing services to remote and scattered communities.[20] Other innovations include the creative sharing of resources, such as the University of Helsinki making ICT equipment in a biological research station in remote Lapland available for language tuition in a region where there is a shortage of teachers.[21]

Pooling resources, sharing facilities and cooperating in development strategies are a potential way for small rural local authorities to overcome problems of their small size. At the same time, good communications to the closest city and the more extensive range of services it offers are equally important.

19 Case studies in Scotland show that activities linked to the environment and the natural heritage (environmental preservation, nature tourism, and so on) not only contribute to income and employment in the local economy but they underpin related recreational activities, tourism and the production and marketing of local produce. (Courtney, P., Hill, G., Roberts, D., (2006) The role of natural heritage in rural development: An analysis of economic linkages in Scotland. Journal of Rural Studies, 22 (4), p. 469–484.)

20 Bryden, J., Rennie, F., Bryan, A., and Hay, K., with Lucy Young-Smith (2005), Critical Factors in the Success of One-Stop Shops as a Model of Service Delivery within Rural Locations. Report to The Scottish Executive, Edinburgh.

21 Aho, S., Saarelainen, T. and Suopajärvi, L. (2004), "Creating the North by Innovations", in N. Aarsæther ed. Innovations in the Nordic Periphery, Nordregio R2004:3, Stockholm, p. 169–218. A similar sharing of facilities also occurs in other remote areas, such as the Isle of Skye in Scotland Dargan, L. (2006) UK National Report — CORASON Project, Global Urban Research Unit, University of Newcastle upon Tyne.



1.17 Urban-rural typology of NUTS3 regions

- Predominantly urban regions
- Intermediate rural regions, close to a city
- Intermediate rural, remote regions
- Predominantly rural regions, close to a city
- Predominantly rural, remote regions
- No Data

Sources: OECD, Eurostat, EuroGeographics, EEA, JRC, REGIO-GIS
Close to a city: at least 50% of the region's population lives at less than 1 hour travel by road to a city of at least 100000 inhabitants

0 500 Km

Links between urban and rural areas

Migration trends are increasing the importance of «intermediary» areas and leading to more complex urban-rural linkages than the simple one-way exchange between market towns and their surrounding rural areas. Population growth in urban areas is increasing congestion and land prices, while the demand for quality food, local produce and a rural way of life, on the one hand, and space for housing, public amenities and increased environmental protection, on the other, is giving rise to development opportunities and pressure on land at the same time (Map 1.17).

Improvements in infrastructure and communication technology is tending to encourage growth of urban areas in most parts of Europe. Improved accessibility is creating new job opportunities for rural as well as urban populations, so long as they can commute and have the necessary education and skill levels.

The arrival of increasing numbers of people from towns and cities can alter the rural character of areas. While it might push up income and tax receipts and so help to maintain public services and expand the local market, it can lead to widening social disparities and new tensions by increasing house prices to levels that locals cannot afford. In some of the more remote rural areas, especially in the UK, the growing number of non-permanent residents in second homes and the declining number of locals is causing local service providers to close down, so encouraging more locals to leave and initiating a downward spiral.

Offices and factories tend to locate along transport routes, in out-of-town business parks and in towns easily accessible by car inducing even more commuting and pressure on accessible rural areas. Public transport has usually not kept pace with the building of new roads, which has led to more use of private cars and a further deterioration in public transport services, hitting low income groups without access to a car and excluding them from new employment opportunities.

Mountain areas

Although most mountain areas share common features such as sensitive ecosystems, pressure from human settlement and problems of accessibility, they are in fact extremely diverse in terms of socio economic trends and economic performance.

For example, population remained relatively stable in northern and central Europe, while it decreased in Eastern Europe. In the south, some areas experienced growth, others decline. Similarly, traditional activities have tended to decline in some areas, while tourism has expanded, promoting economic development and providing job opportunities to the younger generation which was no longer obliged to leave in search of employment. In other mountain areas, however, productivity and employment have remained low and have shown little tendency in recent years to catch up

With economic development, however, pressure on the ecosystem of these regions has increased posing new threats to the environment. Mountain areas are also threatened by international road traffic, calling for solutions linking rail crossings to the road network. New opportunities may also be provided by modern telecommunications infrastructure, which — though slow to be installed largely because of the geographical features — can help to overcome many problems of accessibility which these regions face.

These trends increase the importance of spatial development policies and the coherent management of land use. Small and medium sized towns can have an important role to play in this regard. Around 21% of the population in the EU lives in towns of between 5,000 and 100,000. Such towns provide important services and facilities for both their inhabitants and surrounding areas.

Towns can benefit rural areas through the services they provide, while people living in towns can equally benefit from being close to rural areas. Towns can, therefore, serve as centres of development for rural areas, as markets for the products produced there and a focus for employment services of all kinds and cultural and recreational activities. There is a mutual dependence between rural towns and the surrounding areas since the viability of the serv-

ices the former provide is partly dependent on the demand in these surrounding areas. Consequently, cooperation between rural and urban authorities is important for spatial planning and development.

Towns are important in strengthening territorial cohesion either by supporting polycentric development or by offering key services to surrounding rural areas. There are a number of examples of towns in reasonable reach of each other cooperating by sharing the functions they perform and between them providing a range of services and amenities. Such cooperation contributes to less spatial concentration and to more a balanced pattern of regional development.

Factors determining regional competitiveness, growth and employment

There are a range of factors which determine the competitiveness of regions and, accordingly, their potential for economic growth and employment creation. Sound macroeconomic policies combined with structural policies are fundamental in improving competitiveness. An economic context characterised by price stability and sound budget balances will tend to benefit from lower interest rates. This, in turn, stimulates investment and capital accumulation, increasing both productivity and employment. It also helps to increase the rate and diffusion of innovation and reduces the cost of capital and, therefore, consumption and wages can increase in relation to production real wages.

Another critical factor is the efficiency and effectiveness of public administrations at national, regional and local level, which has a large impact on economic development and job creation. For example, high levels of corruption, red tape, low quality of the judiciary system and a large shadow economy (all symptoms of poor administrative performance) directly affect overall competitiveness. Public sector activities may also affect productivity and growth by changing the productivity level of the public sector itself and by triggering productivity increases in the private sector.

More fundamentally, growth and jobs are determined by framework conditions such as the endowment of infrastructure of various kinds — physical, in the form of transport and telecommunication networks, human, in the form of the skills and know-how of the work force, and social, in the form of care and other support services. They also include the capacity for innovation, which is an increasingly important determinant of competitiveness and which is linked to human resource endowment but which encompasses as well the resources devoted to R&D and the effectiveness with which they are used.

Cohesion policy can make an important contribution to create these conditions. They are examined in turn below, focusing on the way they differ between regions and how they have tended to change over recent years.

Making Europe and its regions more attractive places to invest and work

As recognised in the EU Treaty (Article 16), access to services of general economic interest is of major importance in achieving economic, social and territorial cohesion. The existence of an efficient transport system, a high speed telecommunications network and continuous energy supply is a key determinant of the capacity of regions to attract business investment.

Transport

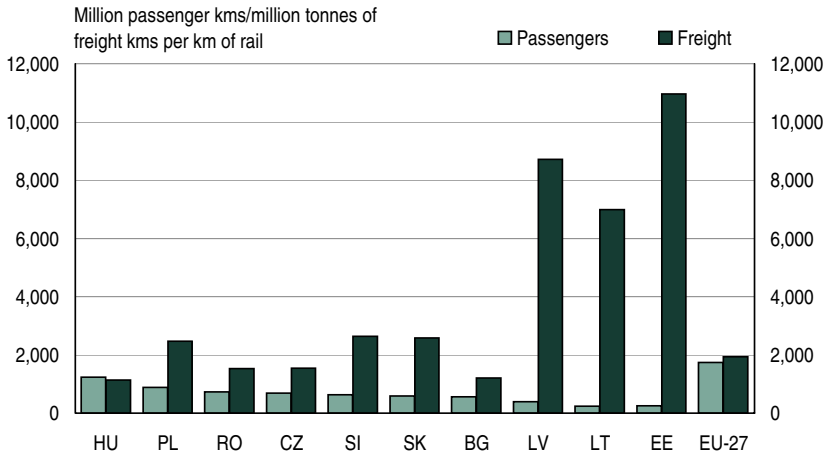
Transport infrastructure is an important aspect of regional competitiveness and a source of comparative advantage for businesses located in areas which are well endowed[22]. This is confirmed by the significance attached to it by businesses when deciding where to invest. The annual European Cities Monitor[23], in its survey of business decision-makers, identifies international links and connections to other major economic centres as the third most important criteria for determining the location of investment. The same survey, moreover, reports this as the main way in which decision-makers consider that locations can be improved.

22 Camagni, 2002

23 Cushman & Wakefield

Investment in infrastructure has significant direct effects on GDP at both national and regional level as indicated by macroeconomic analysis[24]. More detailed analysis of investment in Spain, however, shows that the returns can vary markedly across regions depending on the initial transport system in place, which affects the potential gains from new investment. Investment in cross-border links has directly helped to increase exports of goods and services to the rest of the Union.

1.24 Usage of railway lines, 2005



Source: DG TREN

At the same time, by bringing regions closer together, investment in transport increases competition between them, with implications for both the work force and businesses. The realisation of the potential advantages from improving accessibility, therefore, depends on the competitiveness of the regions concerned and some are liable to lose out as they become more open to competition from elsewhere.

General situation of transport in the EU

The situation as regards the endowment of transport infrastructure and consequent accessibility differs markedly across the EU. So far as roads are concerned, there are continuing differences between the EU-15 countries and the new Member States in the density of motorways[25]. With the exception of Slovenia and Lithuania, they all score under 50% of the EU average. Despite a tripling of motorways length in Greece and a six-fold increase in Ireland between 1990 and 2004, both countries still score under 50% on this indicator.

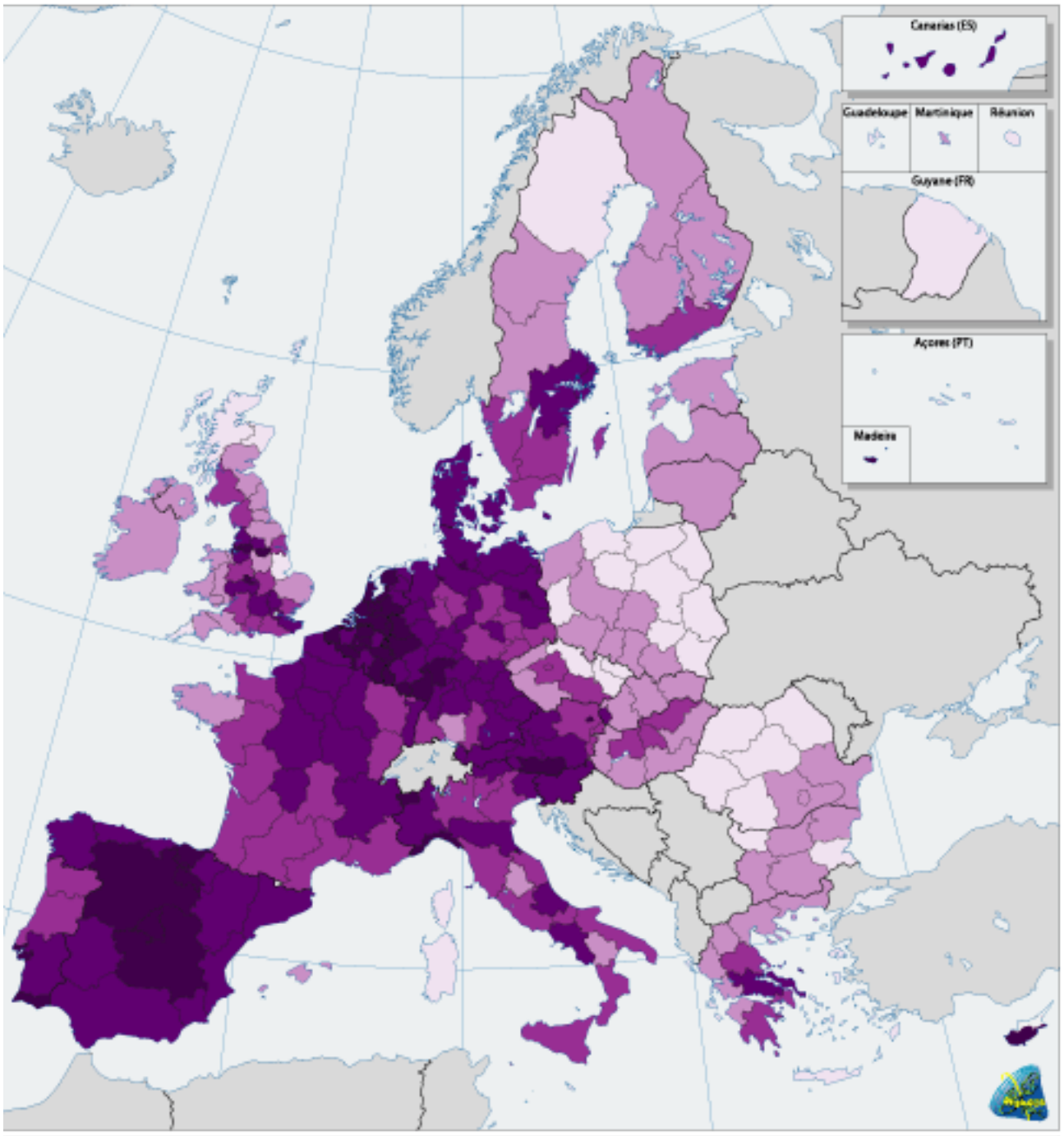
In 2004, Bulgaria, Romania and Poland, all had a motorway density index below 30% of the EU average. Romania's motorways did not increase between 1990 and 2002. In Bulgaria, motorway length increased by 21% between 2000 and 2004, while in Poland, it more than doubled between 1990 and 2004, almost half of the new motorways being completed in 2004 (Map 1.18).

Because of significant investment in recent years, the density of motorway network in Spain and Portugal is now above the EU average. Half the additional length of motorways constructed between 1990 and 2004 in the EU, was built in these two countries. For railways, the situation is very different from that of roads. In all the new Member States, the density of the network is significantly higher than in the rest of the EU. A substantial part of the network, however, consists of single-track lines or is not electrified (only 11% of lines in Latvia and 7% in Lithuania as against an EU average of 50%). Severe speed restrictions are also in place in a number of countries because of the poor state of repair of the network.

In consequence, at the same time as competition from roads has intensified, the rate of use by passengers has fallen (Fig. 1.24). By contrast, freight usage has expanded, especially in the Baltic States, where there is significant transit transport. In Estonia and

24 The socio-economic impact of projects financed by the Cohesion Fund. 1999. London School of Economics and Political Science, under direction of Dr. Robert Leonardi. Published by the Office for the Official Publications of the European Communities, Luxembourg.

25 Density as defined by the length of motorways in relation to population and surface area.



1.18 Density of motorways, 2004

Index of length, relative to area and population

- 0
- < 75
- 75 - 150
- 150 - 250
- >= 250
- no data

EU-27 = 100

BE: 2003; IT: 2001
IE : national level

Sources: Eurostat, DG TREN, European Road Federation, EuroGeographics

0 500 Km

Latvia, the freight carried by rail exceeds that carried out by road (accounting, respectively, for 69% and 55% of the total).

In the rest of the EU, the TGV network is the only part of the railway system network to have expanded in recent years, the overall length of line, which amounted to 2,800 kms in 2003, increasing by 10% over the preceding two years, with another 2,500 kms under construction.

As regards air travel, the number of passengers continues to grow following the fall after the September 11 2001.

The volume of air traffic is largest in the UK, reflecting the predominant position of Heathrow. It is next largest in Spain because of the scale of tourism, with over 30 million passengers a year flying into Palma de Mallorca and Malaga.

The largest growth of traffic has occurred in secondary airports, reflecting their use by low-cost airlines, and in the capital cities of the new Member States, stimulated by enlargement.

In terms of accessibility to flights in 2005 (Map 1.19), 5% of the EU population lives more than 90 minutes away from an airport. 51% of the population can access between 10 and 500 daily flights within 90 minutes. London clearly dominates by providing access to more than 3000 flights a day, while Paris and Frankfurt offer access to more than 2000 flights a day.

Access to flights in the new Member States is considerably lower than in most of the EU-15 countries. In the future, their situation will improve as road access is upgraded and more flights arrive and depart from their airports.

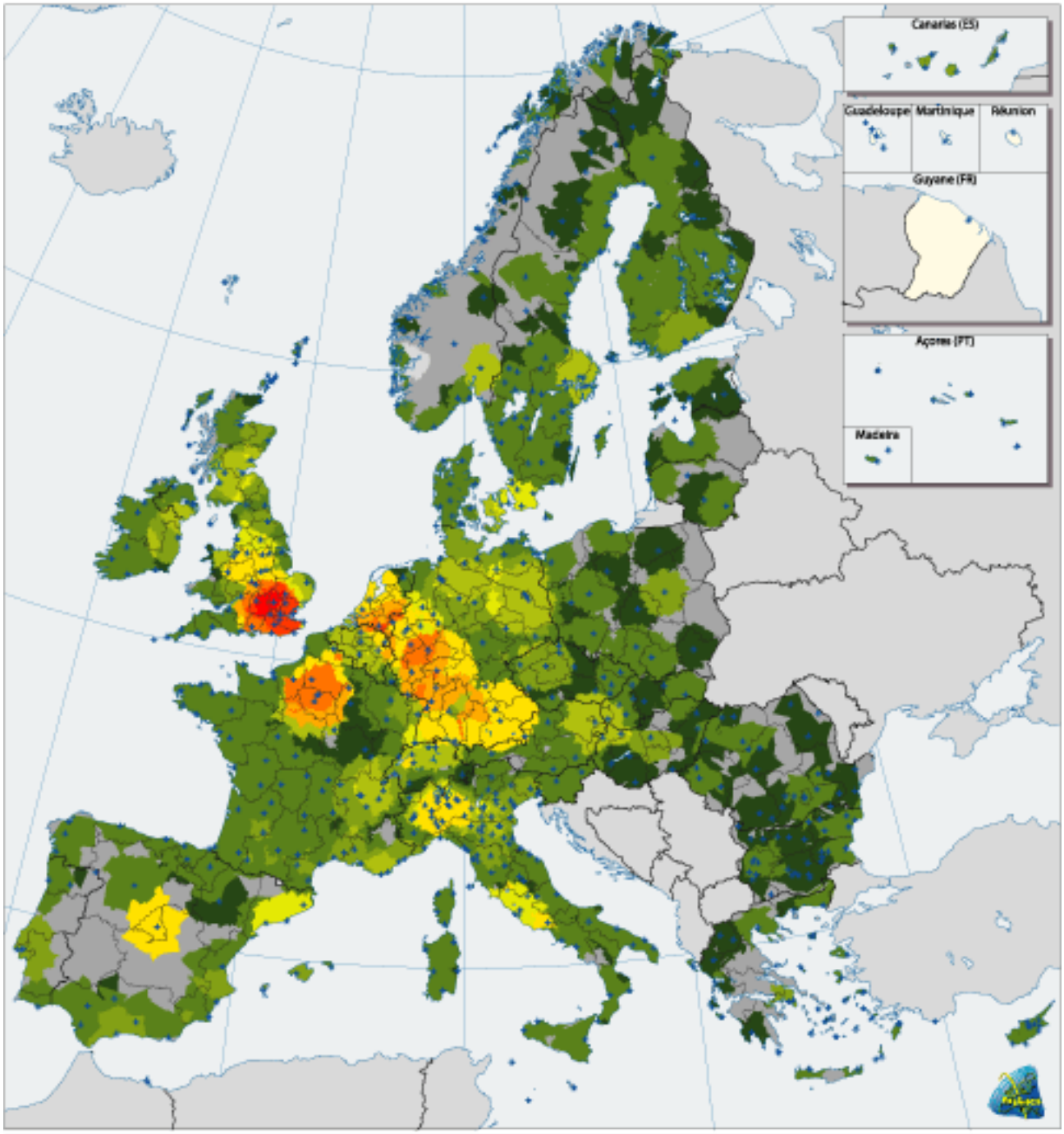
The growth of sea transport has also continued, principally as a result of the growth of container traffic and encouraged by investment in expanding capacity and in establishing inter-modal links. Growth has been especially significant in ports in the new Member States (in Gdansk, Riga, Tallin and Constanta), goods traffic increasing by between 30% and 60% over the period 2000 to 2003. If it is to be sustained, however, it needs to be accompanied by investment in transport links with the surrounding area.

The use of river transport remains small except in Germany and the Netherlands and shows little sign of increasing. The Danube, which has considerable potential in this regard, is an exception, the volume of freight transported expanding since 2000, while still remaining small in Hungary, Bulgaria and Romania. This potential, however, requires substantial investment in port capacity and links with surrounding areas if it is to be realised, necessitating in turn close cross-border coordination and cooperation between the regional and national authorities concerned.

The change in the use of different modes of transport highlights the continuing predominance of road transport for freight, which now accounts for over 44% of the total, while the share carried by rail has remained unchanged at around 10%. Rail is significantly more important in the new Member States, its share exceeding 30% in the Baltic States and Slovakia, though it has declined rapidly since the early 1990s. As a consequence of the growth of traffic, the major transit routes across Europe have become increasingly congested, most notably in the Benelux countries and Germany, but also in Austria and the Czech Republic as well as in France along the Rhone valley and the Mediterranean coast.

Roads, along with sea transport, have, therefore, accounted for almost all the growth of freight over the past 10 years. This growth is closely correlated with growth of GDP, averaging some 2.8% a year over the period 1995 and 2004, somewhat more than the latter. Road haulage increased by 3.4% a year as against only 0.6% for freight by rail.

Growth of freight by road was especially high in the Baltic States and Slovenia, where it reached 300% in Latvia between 2000 and 2004 as a result, in addition to their economic growth, of the transit routes which go through them (international freight accounts for around 75% of the total in these countries, or even more in the case of Lithuania). It was also high in Poland (101%), Spain (117%) and, above all, Ireland



1.19 Access to passenger flights, 2005

Number of flights per day

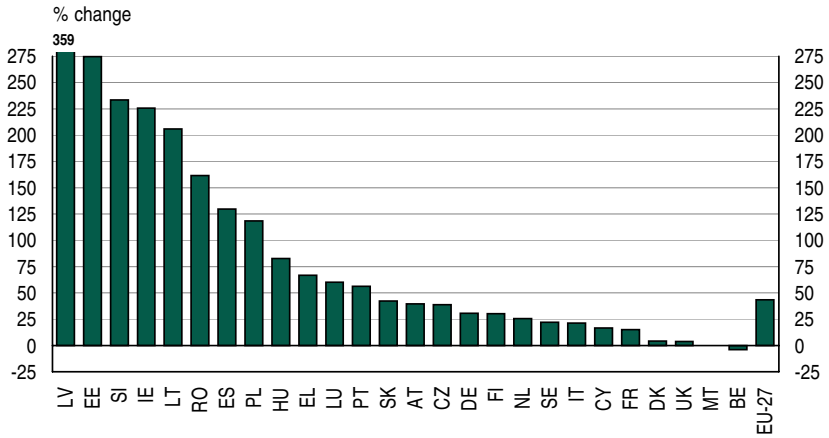
- 0 - 10
- 10 - 250
- 250 - 500
- 500 - 750
- 750 - 1000
- 1000 - 1500
- 1500 - 2000
- 2000 - 2500
- 2500 - 3000
- > 3000
- travel time to nearest airport > 90 min
- no data
- airport

Cumulated daily number of passenger flights available within 90 minutes of travel by road
2004 or 2003 flight data for some airports
Incomplete flight data for Slovakian airports

Sources: Eurostat, EuroGeographics, DG REGIO-GIS

0 500 Km

1.25 Growth of national and international road haulage, 1995-2005



BG not available. EU-27 includes estimate for BG
Source: DG TREN

(212%), as a consequence of both high growth rates and road construction (Fig. 1.25).

Moderating this upward trend in line with the objectives set out in the White Paper on Transport requires the increased integration of the different modes of transporting freight as well as the modernisation of railways. This equally entails investment in the 'interfaces' between the different modes (such as loading platforms) at the main terminals, especially at ports.

Links between the main urban centres

The development of urban centres, as well as of the neighbouring regions, requires that they are accessible by road, rail and air. The significant growth of air travel and the increasing connections to regional airports as a result of the development of low-cost airlines has enabled links to these centres across the EU to be improved.

Although the main conurbations are all connected by rail, there are still very few which are linked to the high speed network, which in 2003 was confined to just 5 countries (France, Germany, Italy, Spain and Belgium), and which is justified only for the larger countries, at least as regards connecting secondary centres. As yet, none of the new Member States are included despite the expected developments under the Trans-European Network programme[26].

Many regional centres across the EU are still not connected to the motorway network. This is particularly the case in Poland, where apart from Warsaw, most cities, including Poznan, Gdansk, Lublin and Bialystok remain unconnected.

Regional accessibility and connectivity

In addition to their infrastructure endowment, it is important to consider regions in terms of their accessibility. A composite indicator of accessibility[27] highlights the difficulties affecting islands because of travel time by car or train being increased by the sea crossing. Malta and Cyprus are affected the most, but it is much the same for Greek, Spanish, Portuguese and Italian islands. This highlights the importance of air travel more than indicating the deficiencies of rail and road networks.

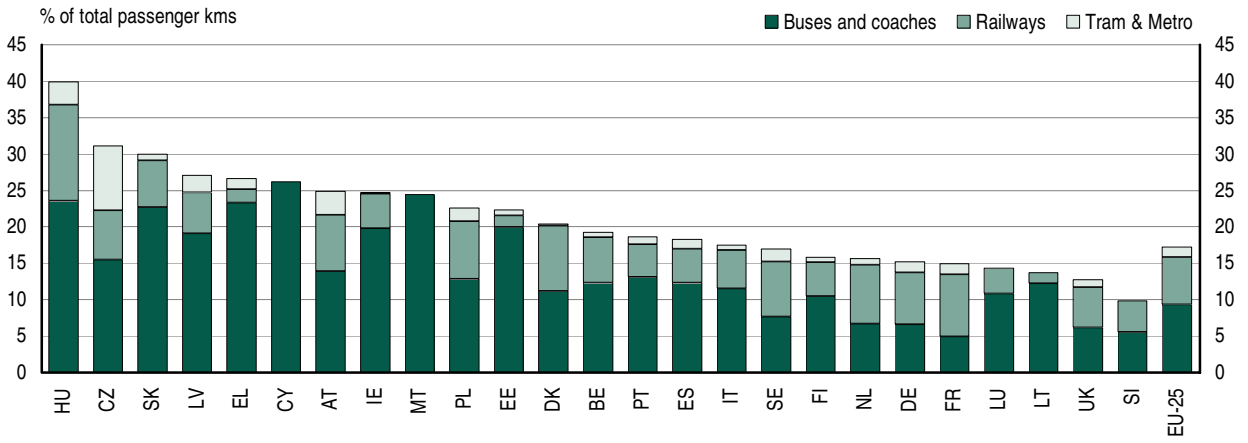
Eastern regions have both low accessibility by road and few motorways, reflecting the fact that the motorway network has been constructed, quite rationally, to serve the capital cities and the most populated conurbations as a first priority.

Despite the size of the network, problems of accessibility stem more from the state of the railways in the new Member States as well as in a number of peripheral regions in the other parts of the EU, in Greece, Portugal and Ireland. As noted above, this is a result of the low operating speeds caused by the lack of

26 The Decision Nr 884/2004/EC on trans-European transport guidelines establishes new objectives and defines "30 Priority projects."

27 Strategic evaluation of Transport investment priorities under Structural and Cohesion Funds for the programming period 2007–2013, Ecorys with Speikermann & Wegener, 2006. This indicator incorporates the notion that while a peripheral region may never have the same level of accessibility as a central one, it can at least achieve the same journey speed.

1.26 Modal split of passenger kms over land in the EU-25, 2004



BG, RO: no data available

Source: DG TREN

maintenance, the limited extent of electrification, the large number of single-track lines, the mountainous terrain in many places and the poor cross-border connections. Rationalisation, involving the closure of under-used lines, combined with modernisation of the network is, therefore, required in these regions.

The situation, however, has improved in recent years through new infrastructure coming into use, notably in France, Spain and Greece, and the increased accessibility of a number of regions in the new Member States, especially border regions as a result of investment in crossing points to increase traffic flows (Map 1.20).

Connectivity

Improving the accessibility of regions to the fullest extent requires not only investment in the main routes but also in secondary networks to ensure that local areas are properly connected. This is particularly important for the most remote areas as well as the least densely populated areas which it is not cost effective to link directly to the main networks. The need is to ensure that there are good road connections to motorway access points and to railway stations as well as, in the case of freight, to ports, especially to container ports.

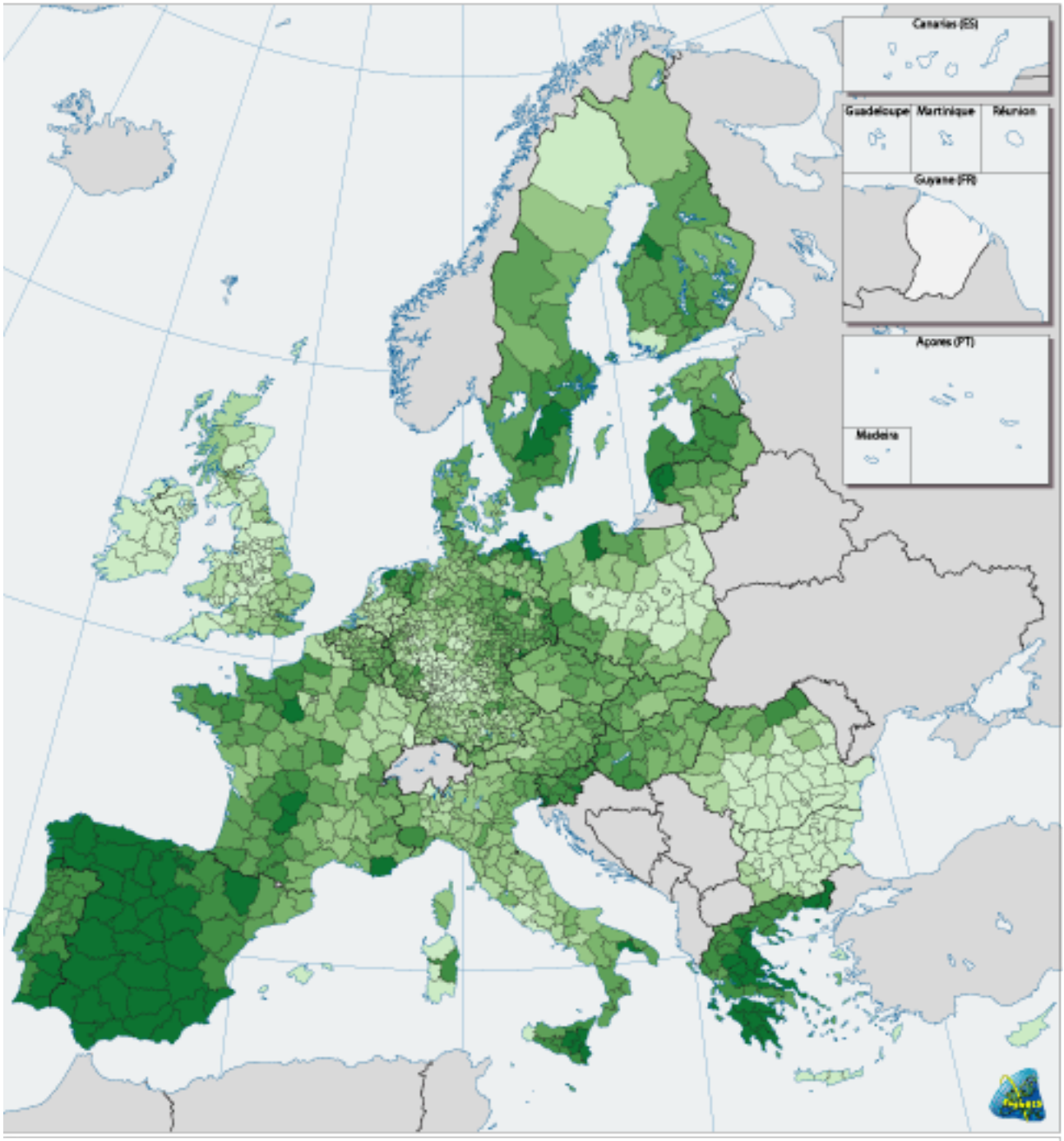
There is an equal need to improve public transport, which has tended to expand slightly in recent years, partly because of an increase in provision (the metros in Athens and Lisbon, for example). Growth, however, has been generally less in the new Member States where public transport has faced competition from the rapid expansion of car ownership (Fig. 1.26).

In addition, in order to achieving more balanced regional development, there is a parallel need to diversify links between regions within Member States, which means improving railways, giving priority to the connections between the main conurbations and the national capitals, but also air travel, by supporting the present growth of regional airports, To this end, the regional authorities concerned could perhaps make use of public service obligation contracts and the related subsidies to overcome the low profitability of such links.

Travel time to main railway stations gives an indication of the efficiency of secondary networks and emphasises the continuing problems of accessibility of regions with difficult terrain (in Spain, France, Romania, and the North East of Poland) as well as border regions in the Baltic States, Finland and Sweden, where some places are almost two hours from the nearest station.

Energy

Final energy consumption has continued to increase in EU-27 Member States even if at a modest rate



1.20 Change in potential accessibility (by car), 1998-2003

Change in total accessibility in pct

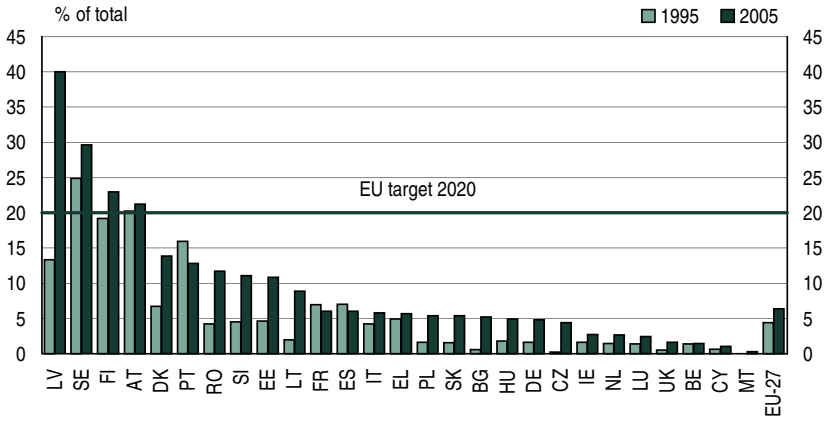
-3.4 - 0.8	3.2 - 6.8
0.9 - 1.2	6.9 - 15.0
1.3 - 1.9	15.1 - 47.3
2.0 - 3.1	

Sources: Eurostat, REGIO-GIS

0 500 Km

(by 5% between 1990 and 2004), with the transport sector growing the most and accounting for the largest share of the total, a third of overall consumption. Over this period, the share of oil in energy consumption declined by 3 percentage points, to just over 42%. While some countries have managed to reduce this share by more (Germany by 8% and Sweden by over 6%), the share has increased in many of the new Member States (in Bulgaria, the Czech Republic, Estonia, Poland and Slovakia, as well as in Romania where it rose by 18 percentage points).

1.27 Share of renewables in total primary energy consumption: 1995, 2005 and 2020 EU target



BG, RO: 2005 data relate to 2004
Source: Eurostat

The availability of a secure supply of energy is important for both the quality of life and economic development. The development of energy networks needs, therefore, to be associated with the establishment of truly national grids as well as with a more open and competitive market. There are differences, however, between gas and electricity networks.

The present capacity of electricity networks seems generally insufficient to enable any expansion of trade in energy to occur to match the increase in demand. This inadequacy combined with limited production capacity gives rise to serious problems of congestion on some lines, which led to a number of general power failures in 2003. This situation can affect regions and countries asymmetrically. Several Member States, such as Spain, Italy, Greece, Ireland, Poland and the UK are, therefore, below the Barcelona objective of a level of interconnection of 10% of production.

The internal limitations of the network which are the source of congestion are often localised and, even more often, concern cross-border connections. A recent study[28] has identified a number of network deficiencies necessitating investment in the immediate future in the south-west of Poland and along many of the borders of the new Member States. Projections[29] made on the assumption of a continuation of present trends and policies point to a likely worsening of congestion up to 2010 along particular borders.

So far as gas is concerned, the coming decades will see growing dependence on imports. The fact that gas, unlike electricity, can be stored means that there is not the same risk of a break in supply.

The long-term availability of energy reserves, which other things being equal determines the security of supply, also depends on the development of renewable energy. As noted above, regions are unequally placed in this regard, with significant variations in the potential development, in particular, of wind and water power, geothermal and solar energy and biomass. Nevertheless, the wide range of renewable energy sources accessible to most regions (biogas and biofuel, for example) should allow a wider geographical spread of this type of production.

In March 2007, the European Council set the binding target of 20% of total energy consumption coming from renewable energy sources by 2020. While this share has risen over the past 9 years, the increase has been very slow. Between 1995 and 2004, it rose from just below 5% of the total to 6.4% in the EU (Fig.

28 Network capacities and possible congestion within the Accession Countries, KEMA, 2005.

29 TEN-ENERGY-Invest, CESI, ITT, ME, RAMBØLL 2005.

1.27). There will, therefore, need to be a major acceleration in the rate of increase to meet this target. The fastest growing sources of renewable energy are wind power and solar power. The two Member States which have the largest share of wind power are Denmark and Spain, where it accounts, respectively, for 2.8% and 1% of total energy consumption, while the EU average is only 0.3%. Solar power provides only 0.04% of energy consumed in the EU-27, almost double the share in 1995, but still very low. Biomass is considered to have significant potential for development in many of the new Member States.

There seems to be less scope for expansion of the more "traditional" source of renewable energy — hydro-electricity — which in fact has declined slightly as a share of total energy consumption over recent years (from 1.7% to 1.5% of total energy consumption between 1995 and 2004).

Telecommunications

Digital technology makes it possible to have a single system of communication for video, audio and voice communication. Access to high capacity networks is expanding rapidly, almost 16% of population in the EU being connected in October 2006 as against 11.4% a year earlier. This growth is primarily a consequence of competitive pressure and effective market regulation, new entrants accounting for almost 52% of the broadband market. Competition is facilitated by opening access to local networks, which involved 46% of new entrants in 2005. There is, however, a significant gap between the less well endowed cohesion countries and other Member States. Moreover, the evidence indicates a widening of this gap, the better endowed Member States increasing rates of connection most rapidly.

Within countries, disparities remain equally large, notably between rural and urban areas. While on average some 93% of households and businesses can be connected to broadband in urban areas, in rural areas the figure is only 66%, with an even wider gap in the new Member States.

The slow development of broadband in the less densely populated areas has led to renewed government intervention in the face of market failure and the neglect by operators of areas with the lowest rates of return or which are unprofitable.

In order to accelerate the development of telecommunication services, a number of local authorities have taken action, supported by national policy, to encourage the construction of broadband networks and even assumed the management of these. In doing so, they have assumed the risk normally borne by the operator.

Initiatives have been taken in various parts of the EU. In Greece, ambitious broadband programmes were launched in 2006. In Spain, a plan has been implemented since 2005 to provide broadband to rural and remote areas under the same conditions as those in urban areas. In Ireland, regional broadband networks are being extended from metropolitan areas. In France, the under-Ministerial Regional Planning Committee (CIADT — *Comité interministériel d'aménagement du territoire*) approved a policy in 2004 of providing broadband access to 98% of the population and at least 85% of that in each department. This policy which combines measures to promote demand as well as supply has enabled local authorities to invest in the development of broadband networks either directly or through public-private partnerships. In Italy, the aim is to provide universal access to broadband services by 2011. Under the Linguar Portugal (Connecting Portugal) action programme, the aim is to to triple the number of families connected to broadband and to connect all schools by 2010 as well as keeping prices among the lowest in the EU. In Hungary, Estonia and Latvia, concrete targets have been set for the extension of broadband.

In Northern Ireland, all the population are covered at a single rate. In Sweden, the Government established a fund for financing broadband with the aim of constructing networks in rural areas, the great majority of which (270 out of 290) are sparsely populated. Public authorities have an important role to play in supporting the development of digital literacy and

eSkills and in bringing SMEs on line. The latter is an area where progress is extremely slow: while more than 50% of large enterprises in the Union use automated eBusiness processes within their companies, less than 20% of SMEs do so and this gap shows no signs of narrowing.

Health services

The availability of health services represents an important element of regional attractiveness, since it delivers long-term economic and social benefits. The ageing of the population adds to the need for such services. Particular regions might experience inflows of population with concentrations of the elderly around the best equipped centres so adversely affecting territorial cohesion. This is liable to impose strong pressure on finances in the areas concerned at the same time as there are likely to be constraints on public budgets.

Examination of the accessibility of health services in the EU (or at least in the Member States where data are available) highlights a number of features:

- Marked differences at national level in the provision of health centres. France, Germany, Belgium, the Netherlands and, to a lesser extent, Italy, have a high level, often reflecting their high density of population. The countries in central Europe have an avarage level of provision, while Spain, Portugal, Greece and Ireland as well as Denmark, Finland and Sweden have the lowest level. For the last two countries, the level is significantly higher in southern areas.

- This picture conceals differences in the availability of beds per inhabitant (Map 1.21). In these terms, Ireland and Finland are the best endowed, reflecting a policy of favouring large, well-equipped health centres rather than small, more widely dispersed ones. By contrast, the low level of provision remains in Spain, Portugal, Greece and Denmark, which could lead to problems as population continues to age.

- In some Member States, problems of accessing health services in some areas are more a reflection of difficulties of communication, as a result largely of their geographical features than of the low level of provision as such.

Environmental protection and growth

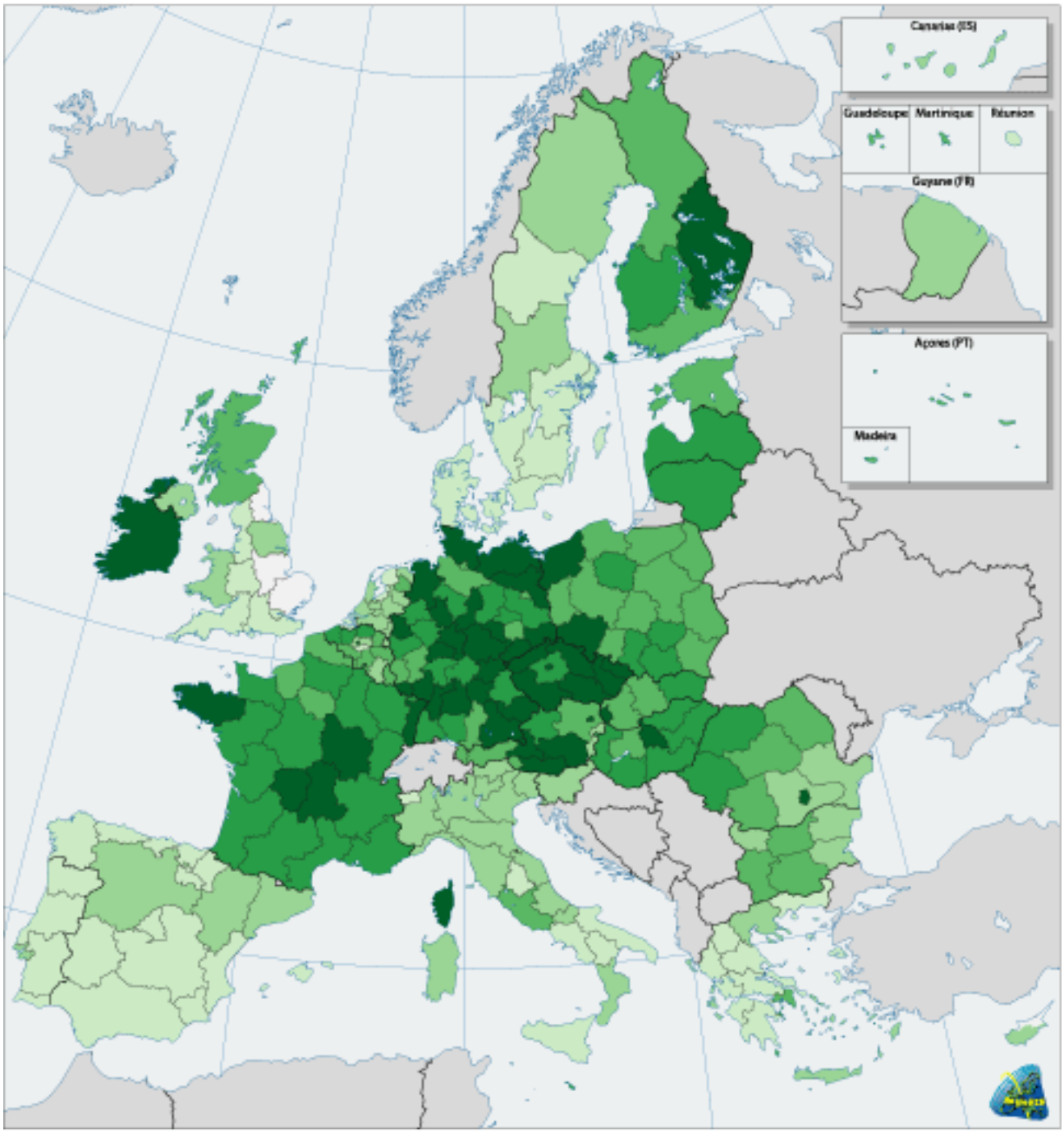
Substantial differences exist between Member States and regions as regards environment protection, the problems threatening the environment and the local capacity to address these problems. Such disparities are particularly apparent between the EU-15 and many of the new Member States.

Water

Access to a sufficient supply of water and water that is safe to drink is critical to both the well-being of residents and the competitiveness of regions. Some economic activities rely heavily on an abundant supply of water such as agriculture and tourism. Both require that water reserves are managed in a sustainable way as shortages would have severe consequences.

Water availability and quality, however, differ significantly in the EU from north to south and from east to west. In most regions, total water abstraction has decreased but water stress or severe water stress still affects 18% of Europe's population[30]. Over-abstraction of water remains a major concern in areas such as the coast and islands of the Mediterranean, where more and more areas are affected by salt-water intrusion. In some countries, loss of water by leakage from distribution systems can still be significant. Several southern EU-15 countries have network problems which lead to high losses and bad water quality. Four countries — Cyprus, Malta, Italy and Spain — are considered to be water stressed (withdrawals greater than 30% of total available supplies). Most of the central and eastern countries are also faced with network problems. In almost all of the new Member States, some of the water resources are contaminated due to either natural causes (arsenic, fluoride, boron) or due to the agro-industrial heritage (such as old Soviet farms). The capacity

30 For more information see: http://ec.europa.eu/environment/water/quantity/pdf/comm_droughts/2006_11_1st_int_report.pdf



1.21 Hospital beds, 2003

Number per 100000 inhabitants

- < 416.10
- 416.10 - 562.55
- 562.55 - 712.10
- 712.10 - 871.40
- >= 871.40
- no data

EU-25 = 581

ES, IT, LU, NL, PL, PT, SI: 2002
HU: 2001
EL, SE, UK (England): 2000
UK: NUTS1; IE: national level
Sources: Eurostat, Nordregio

0 500 Km

to purify drinking water is also lacking. At the same time, water consumption by industry in some of the new Member States, such as Bulgaria and Estonia, has tended to decline due to falling production in traditional industries which use water intensively.

Although demand for drinking water is forecast to increase in a number of Member States, partly as a result of the growth of tourism, in others it is expected to remain below current supply capacity (in Lithuania, only 30% of capacity is currently used) and it is projected to fall due both to population decline and the imposition of new charging arrangements in some of the new Member States. In some of the Member States in which water demand is set to increase, it is planned to meet this by reducing leakage and through programmes for saving water and managing reserves better (in Malta, for example).

To comply with the EU Directive on this, waste water collection and treatment still requires significant investment throughout the EU. While Denmark, Germany and Austria achieved full compliance between 1998 and 2002, in most other Member States, many conurbations lack adequate waste water collection and treatment facilities. In particular, 17 major cities had no waste water treatment at the beginning of 2003[31]. A number of Member States have also failed to designate sensitive areas (e.g. those at risk of eutrophication) or are behind schedule in establishing adequate sewage treatment capacity. As a result, more than 50% of the waste water discharged into sensitive areas in the EU-15 is not being treated adequately[32].

According to the latest data available (mostly for 2000 or 2001), just over 50% of the resident population of the new Member States were connected to urban waste water collection and treatment systems. A further 11% were connected to collection systems without treatment. This compares with some 80% on average in the EU-15. While some new Member States have experienced a reduction in the volume of waste water requiring treatment because of a fall in industrial use, as in Poland, or because of stronger environmental policy, as in Latvia, in others, the volume is likely to increase.

Waste

In 2004, 2.8 billion tonnes of waste was generated in the EU, posing major environmental problems especially in regions where recycling rates are low. Agriculture and industry account for a large proportion of this waste, while the share treated by municipalities (about 15% of the total[33]) has, on the whole, remained unchanged at some 518 kilograms per head over the period since 2000. The overall volume of waste has continued to grow in the majority of Member States. In the new Member States, however, GDP growth has not been accompanied by increased waste as has happened in the EU-15[34].

Although the situation varies markedly across the EU-27, the main method of treating municipal waste remains landfill (especially in the new Member States) and incineration. Both these processes are environmentally the least preferred as they contribute to greenhouse gases and other emissions. At EU level, where landfill accounted for 45% of waste disposal in 2005 compared with 56% in 2000, incineration increased over the same period by some 15%. Major differences in the methods employed are evident at national and regional levels, with some countries opting almost exclusively for the landfill solution, while incineration (usually combined with energy recovery) often represents a favoured method in the more developed economies. Incineration with energy recovery has, therefore, expanded markedly in Belgium, Denmark, Finland, Germany, France, Italy and Sweden over the past few years.

At the same time, recycling has increased in virtually all Member States, most especially in Germany, Estonia, Ireland, Spain, Italy, Latvia, Poland and the UK. Nevertheless, the rate of recycling is still very low in

31 See annex to Com(2007)128 final http://ec.europa.eu/environment/water/water-framework/implrep2007/index_en.htm

32 European Commission, 2004. Report on the implementation of Council Directive 91/271/EEC of 21 May 1991 concerning urban waste treatment, as amended by Commission Directive 98/15/EC of 27 February 1998, COM (2004) 248 final.

33 Eurostat

34 The Integrated Assessment. The European Environment. State and Outlook 2005. the European Environmental Agency

the Cohesion countries. Composting is almost as important as recycling in volume terms, with Ireland, Spain, France, Italy, Latvia, Hungary and the UK all showing a significant expansion. Again, however, it remains limited in the Cohesion countries, where in most cases a particular effort is, therefore, needed to shift from a heavy reliance on landfill — which accounts for over 90% of municipal waste in most countries — to more sustainable systems of waste management, in particular to increased recycling[35].

Air Pollution

Air pollution comes at great cost to society. It is estimated that currently the average life expectancy of EU citizens is shortened by more than 8 months due to poor air quality. This can rise to well over a year in more polluted regions such as in the Benelux countries, northern Italy and large parts of eastern Europe[36]. At the same time, investments to improve air quality are estimated to outweigh the costs by a factor of six to one.

While considerable progress has been achieved in reducing many forms of air pollution, the last few decades have seen a levelling of concentrations of the most dangerous pollutants such as particulate matter and ground-level ozone. Both exceed the values set by EU legislation throughout the Union. The daily limit value for particulate matter PM10, for example, has been exceeded in all countries except Ireland, in almost 40% of areas. Principal sources contributing to local poor air quality differ from region to region, spanning industrial sources and generating plants to domestic heating and agriculture. Local action is crucial, even where air quality conditions are difficult such as in the Po Valley.

Transport is the major cause of the most intractable problems of air pollution, the dramatic improvements made by technologies such as catalytic converters in cars being overwhelmed by increases in demand. Further improvements are expected as cars with particulate and NO_x filters are introduced on to the market. A growing problem is the increasing volume of shipping (using high sulphur-content fuel oil) in EU waters, emissions from this source being expected to be on a par with those from all land-based sources by 2020[37].

Improving knowledge and innovation for growth

FDI and regional development

Foreign direct investment (FDI) is of critical importance to the development of lagging regions. It not only directly stimulates economic activity but equally if not more importantly, goes into the construction of production facilities — plants and equipment — which tend to embody new technology as well as new methods of organisation. As such, it is a major means of diffusing knowledge from the more advanced to less advanced regions and, accordingly, tends to boost productivity not only in the activity in which the investment occurs but more generally within the region.

Scale of FDI inflows into the new Member States

FDI is particularly important in the new Member States, representing the primary way in which the productivity gap between the industries and services located there and those in the rest of EU can be narrowed. The scale of FDI inflows into these countries has in many cases been substantial since the late-1990s.

It is most important in Estonia, where inflows are estimated to have averaged some 10% of GDP over the 5 years 2000–2005, while in Bulgaria and the Czech Republic, they amounted to around 8% and in Hungary and Slovakia, 5–7%. In four countries, Latvia, Lithuania, Poland and Romania, inflows averaged 3–4% of GDP over this period and only in Slovenia were they less than this, at just over 2% of GDP. This last, however, still amounted to around 10% of domestic investment (gross fixed capital formation) over the period. In all the new Member States apart from Slovenia, therefore, the average scale of FDI in relation to GDP exceeded the maximum amount of annual support from the Structural Funds (Table 1.7).

35 EU 2003 Environment policy review, COM(2003)745 final

36 Clean Air for Europe studies.

37 European Environmental Agency (EEA), 2005. The European Environment — State and Outlook 2005

Within the new Member States, FDI is often heavily concentrated in the capital city and surrounding regions. While this is partly because of the way FDI inflows are recorded — i.e. being attributed to the head offices of companies which are very likely to be in capital cities even if the ultimate destination of the investment is another region — employment in foreign-owned firms, which is the product of FDI, also tends to be concentrated in the capital. This is the case in Slovakia, Bulgaria and Hungary and to a lesser extent in the Czech Republic and Poland. Some border regions also have a disproportionately high share of employment in foreign-owned firms. In other words, within countries, FDI inflows tend to reinforce regional disparities rather than to reduce them.

1.7 FDI inflows relative to GDP in the new Member States and Cohesion countries, 2000-2005

% GDP

	2000	2001	2002	2003	2004	2005	2000-2005
Bulgaria	5.4	5.1	3.9	10.5	13.9	10.8	8.3
Czech Republic	8.9	9.1	11.3	2.3	4.6	8.9	7.5
Estonia	7.0	8.7	4.0	9.7	8.3	21.2	9.8
Spain	6.8	4.7	5.7	2.9	2.4	2.0	4.1
Cyprus	9.2	9.8	10.1	6.7	6.9	7.2	8.3
Latvia	5.3	1.6	2.7	2.7	4.6	4.5	3.6
Lithuania	3.4	3.7	5.1	1.0	3.4	4.0	3.4
Hungary	7.1	7.4	4.5	2.5	4.5	6.3	5.4
Malta	3.7	:	-0.5	:	2.1	11.0	4.1
Poland	5.5	3.0	2.1	2.2	4.9	3.1	3.5
Portugal	5.9	5.4	1.4	5.5	1.3	1.7	3.5
Romania	2.8	2.9	2.5	3.7	8.5	6.6	4.5
Slovenia	0.7	1.4	4.0	3.8	2.1	1.7	2.3
Slovakia	9.5	7.6	15.5	2.2	2.0	4.4	6.9

Note: No data for Greece
Source: Eurostat plus UNCTAD for Romania for 2000-2002, Slovenia for 2000 and Slovakia for 2000 and 2001.

There are a number of potential reasons why investors could choose to invest in the new Member States other than the lower costs of production which stem from lower wages. These include access to markets in these countries, proximity to the country from which the investment originates, a common language, low corporate taxes and the availability of a suitable work force.

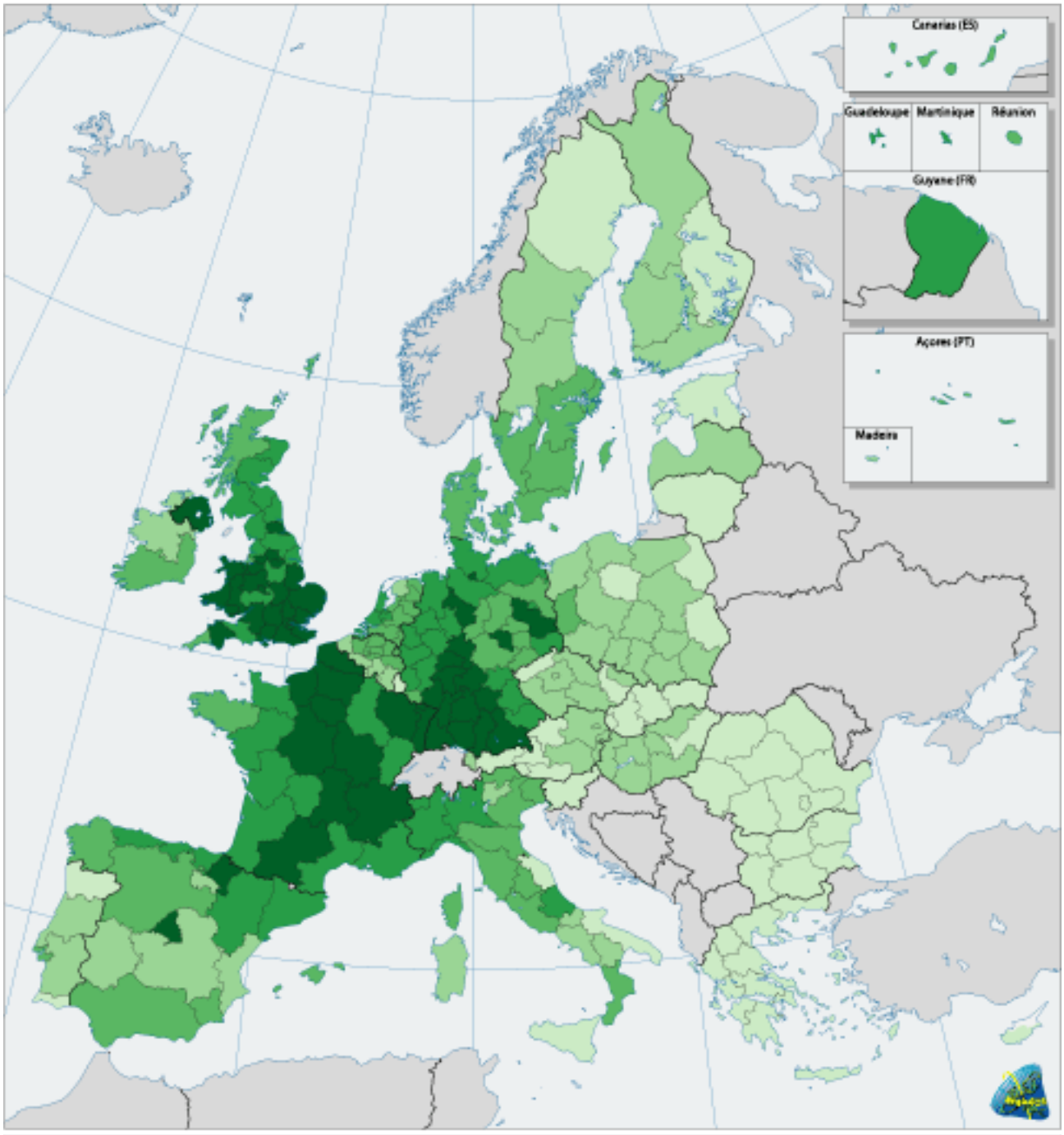
While policy cannot affect factors such as national market size or proximity to national borders, it can influence other factors which determine the attractiveness of regions, not only in the new Member States but more generally. These factors include:

- good basic infrastructure and accessibility;
- a well educated work force;
- good ICT infrastructure and extensive use of ICT;
- a relatively high level of spending on R&D.

While such regional characteristics appear to be important determinants of the regional pattern of FDI in the new Member States and other parts of the EU, for investment in certain sectors the size of national market is a significant factor. In these sectors, large companies seek to have a presence in most national markets. At the same time, in other sectors, especially in manufacturing, there has been significant outsourcing of supplies to low cost regions, leading in some industries to increasing concentration of production in fewer locations. For most activities, however, production remains dispersed across the EU.

Measuring regional FDI intensity in terms of employees in foreign owned firms in relation to the total number shows that the regions with the largest shares are concentrated in the UK, Germany and France (Map 1.22). Spain has two regions with a large share, Madrid and Navarra, and the regions bordering France and the Atlantic also tend to have larger than average shares. In the Netherlands, these employees are concentrated in the Randstad regions, in Belgium, in Brussels and most of the Flemish regions and in Ireland, in the regions in which Dublin and Cork are situated.

In contrast, the new Member States, Finland, Greece, Portugal and southern Italy all have below average shares. Analysis suggests that spill-over effects from FDI seem to have been particularly marked in services in the new Member States, especially in business



1.22 FDI intensity, 2004

Employees in foreign firms as % of total number of employees

- < 1.07
- 1.07 - 2.56
- 2.56 - 6.69
- 6.69 - 13.19
- >= 13.19
- no data

Source: Copenhagen Economics

0 500 Km

activities and the distributive trades, where witnessing the latest methods of organisation in operation has been as important as exposure to new technology in diffusing knowledge. Nevertheless, the relative concentration of FDI in manufacturing means that productivity gains have been comparatively large in this sector.

R&D and innovation

Innovation capacity in Member States

According to a summary indicator (the Regional Innovation Performance Index (RIPI) of the European Innovation Scoreboard),[38] the Nordic countries have the highest capacity for innovation in the EU, surpassing the US and Japan. Many of the new Member States have the lowest level, although some of them (Estonia, Slovenia, and Hungary) score better than the three EU-15 Cohesion countries (Greece, Portugal and Spain).

In terms of changes in the summary indicator over recent years, countries can be broadly classified into four groups.

- Finland, Sweden, Denmark and Germany, the four leading countries in terms of the summary indicator, which have shown less of an increase than Japan, and within the group, the increase for Sweden and Denmark has been less than the EU average.

- The group of countries around the EU average in terms of the indicator — the other EU-15 Member States apart from Greece, Spain and Portugal — which have shown divergent movements, with an especially large increase in Austria and small increases in Ireland and the UK.

- Countries which are below the EU average in terms of the indicator but which are converging towards it, which consist of Greece, Portugal, Slovenia, Hungary, the Czech Republic, Lithuania, Latvia, Cyprus and Malta.

- Countries for which the indicator is below the EU average and which are losing ground in this regard, which consist of Spain, Estonia, Bulgaria, Poland, Slovakia, and Romania.

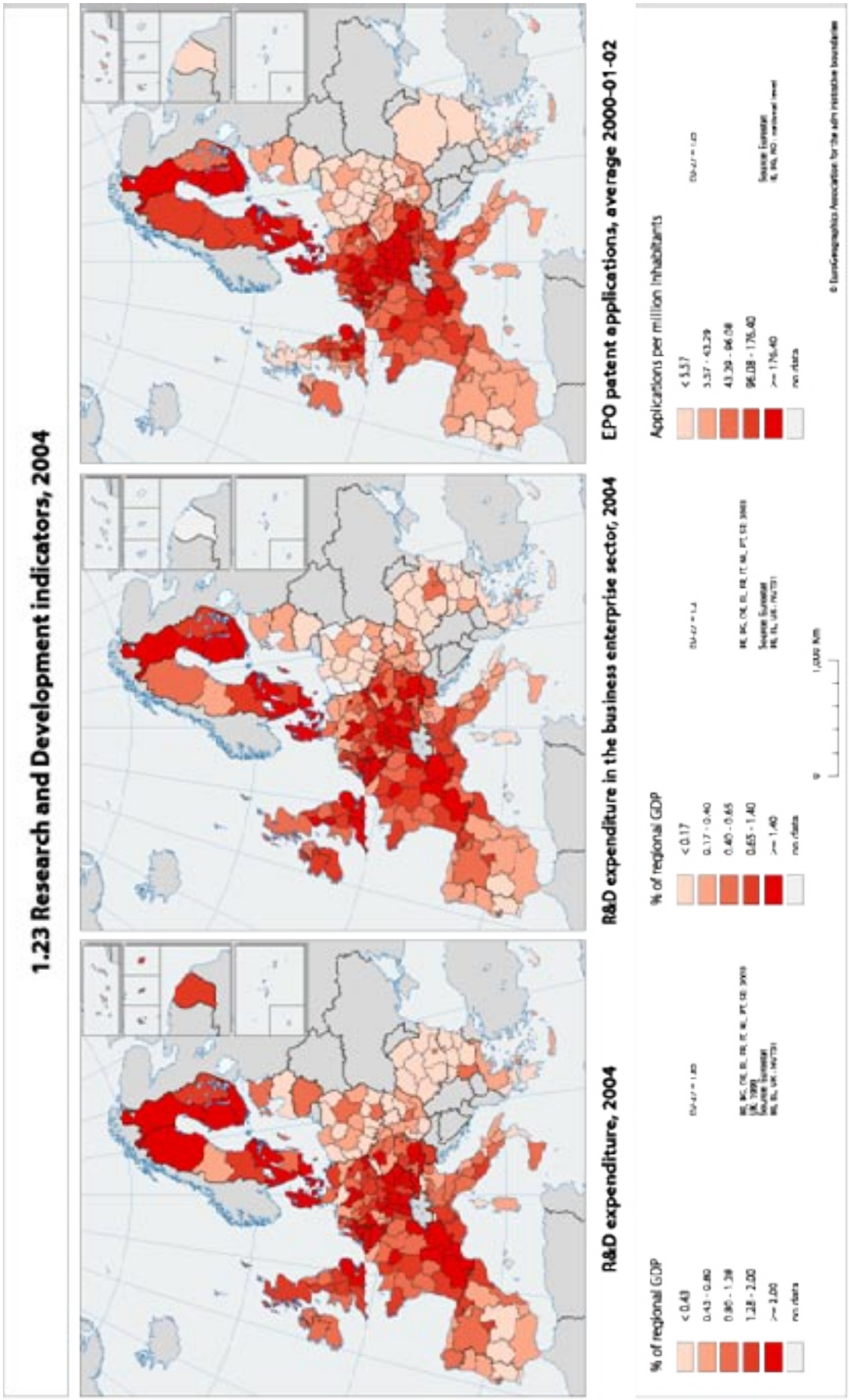
Major regional disparities persist …

According to the latest data available, expenditure on R&D amounted to an average of 1.9% of EU-27 GDP in 2003. Regional disparities, however, are extremely wide. While expenditure in 27 regions exceeded the Barcelona target of 3%, in more than 100 regions, expenditure was less than 1% of GDP. All the regions in which expenditure was highest, except for Dresden in Germany, have a relatively high level of GDP per head and many — 5 of the top 20 — are regions which include the capital city (in Germany, Finland, Sweden, Austria and France). The regions with the lowest levels of expenditure are all in the new Member States or are regions with relatively low levels of GDP per head elsewhere, mainly in the three EU-15 cohesion countries but also in the eastern part of Germany and southern Italy. There are, however, some exceptions, such as Åland in Finland, Corse in France Bolzano/Bozen in Italy and Illes Balears in Spain (Map 1.23).

Nevertheless, in a number of regions with GDP per head below 75% of the EU average — especially in Spain, Germany and Italy, though also in Estonia and Lithuania — expenditure on R&D has risen more than the EU average over recent years.

Much the same picture emerges for expenditure on R&D by the private sector. Only one region with GDP per head below 75% of the EU average, Střední Čechy, in the Czech Republic (the region surrounding Prague), had expenditure above 2% of GDP, the Barcelona target for business R&D, while the highest levels were generally recorded in regions which include the capital city.

38 The summary indicator is made up of a set of 26 input and output indicators grouped into five broad categories: innovation drivers (mainly education levels of the population), knowledge creation (largely expenditure on R&D), innovation and entrepreneurship (mainly SMEs involved in innovation), application (employment in high tech services and in medium-to-high tech manufacturing — ie mainly engineering — as well as high tech exports and sales of high-tech products and of new products), and intellectual property (patents applied for and trade-marks registered).


1.23 Research and Development indicators, 2004
R&D expenditure, 2004
% of regional GDP
< 0.43
0.43 - 0.80
0.80 - 1.28
1.28 - 2.00
>= 2.00
no data
R&D expenditure in the business enterprise sector, 2004
% of regional GDP
< 0.17
0.17 - 0.40
0.40 - 0.65
0.65 - 1.40
>= 1.40
no data
EPO patent applications, average 2000-01-02
Applications per million inhabitants
< 5.37
5.37 - 43.29
43.39 - 96.08
96.08 - 176.40
>= 176.40
no data

A similar variation is evident for the proportion of the work force with tertiary level qualifications and who work in jobs typically requiring a relatively high level of qualification (i.e. as managers, professional or technicians), who can be taken as a broad indicator of human resource endowment in science and technology, defining these terms widely to encompass all type of knowledge and its application. Of the 8 regions where this proportion is the highest, according to the latest data (for 2005), 6 are the location of capital cities (Stockholm, Inner London, North Holland, Ile de France, Luxembourg and Brussels). At the other end of the scale, Portuguese and Romanian regions and one Czech region make up those with the smallest proportions in this regard.

The relative number of people actually employed in high-tech sectors, which can be taken as one of the indicators of R&D output rather than input, varies equally as much between regions, though not altogether in line with R&D expenditure or human resource endowment. The proportion of the total in work employed in such sectors is largest in German regions, which account for 11 of the 12 in which this is largest (Stuttgart and Karlsruhe, neighbouring regions in Baden-Württemberg, having the largest shares), again according to data for 2005. The proportion is also relatively large in other central regions in the Czech Republic (Severovýchod and Střední Čechy), Slovakia (Západné Slovensko) and Hungary (Közép-Dunántúl). All of these regions have among the lowest endowments of human resources in science and technology, illustrating the lack of any necessary relationship between inputs and output in this area.

Nevertheless, the proportion of employment in high tech sectors is generally smallest in regions with relatively low levels of GDP per head, especially those in the EU-15, which also tend to have low levels of endowment of human resources in science and technology, Portuguese and Greek regions featuring prominently among the regions concerned.

Comparisons between regions of changes in human resource endowment over time are severely limited by data problems. There are similar problems, though less severe, in comparing developments in employment in high-tech sectors. The data for the 10 years 1995–2005 indicate, however, that there were significant increases in the share of employment in these sectors in a number of lagging regions in the EU-15 as well as in Hungary (no data are available for this period for most of the other new Member States). The regions in question include, in particular, Leipzig, Chemnitz and Dresden in the eastern part of Germany, Molise and Calabria in southern Italy, Galicia in Spain, Dytiki Ellada in Greece, Nyugat-Dunántúl and Észak-Alföld in Hungary and Slovenia.

On the other hand, the increase has been far from general across lagging regions and in many the share of employment in high-tech sectors declined over this period, even in regions neighbouring those where the share rose. Regions showing a reduction, therefore, include Magdeburg and Dessau in eastern Germany (substantially in both cases), Campania, Sicilia and Sardegna in southern Italy, Asturias in Spain (though only slightly), Dytiki Makedonia, Thessalia and Notio Aigaio in Greece and Közép-Dunántúl in Hungary as well as most regions in Portugal, Norte in particular experiencing a significant decline.

Other output indicators of innovation show an equally wide, if not wider, disparity across regions. In particular, patent applications tend to be far smaller in lagging regions than elsewhere in the EU, especially in the new Member States (though the fact that these are measured in terms of applications to the European Patent Office and are several years out of date tends in itself to bias the comparison against these countries, which do not have a tradition of patenting).

On average, therefore, the number of patent applications to the European Patent Office in countries with GDP per head below the EU average amounted to only 12 per one million inhabitants as opposed to an EU-15 average of 158 according to the latest data available (2000–2002). No regions from any of the Member States with below average levels of GDP per head had above average patent applications and

in only two of the lagging regions anywhere in the EU — Dresden and Lüneburg in Germany, the latter a commuting region close to Hamburg — were applications above average. In almost all regions in Poland, in all regions in Slovakia apart from the capital city, in many regions in Greece and in a number in Portugal, as well as in Lithuania and, on average, in Bulgaria and Romania, the number of applications was under 5 per one million people.

The scale of regional disparities is confirmed by the Regional Innovation Performance indicator[39] *…*

A composite indicator of innovation performance at regional level can be constructed from the indicators described above, together with one or two additional ones[40]. This synthetic indicator (RIPI — Regional Innovation Performance Indicator) covers 208 regions in the EU-25 (it includes only NUTS 1 level regions in Belgium and the UK) but as yet excludes Bulgaria and Romania, and relates to the years 2002–2003[41] (Map 1.24).

According to the indicator, Stockholm has the best overall performance among regions and Sweden among countries, while Notio Agaio in Greece records the lowest value of the indicator and Greece is the lowest ranked country. Regions which include the capital city feature prominently at the top of the scale, while the EU-15 Cohesion countries are ranked towards the bottom, in some cases below a number of the new Member States.

Regions in the Nordic countries, Germany, the Netherlands and the UK are clustered in the top part of the ranking, though there are also regions which include the capital city in the new Member States — Praha, Bratislavský, Közép-Magyarország (where Budapest is situated) and Mazowieckie (Warsaw) as well as Slovenia — in addition to Ile de France, Madrid and Wien. At the other end of the scale, Greek regions dominate those with the lowest ranking, though there also a number of Portuguese (Alentejo, Algarve and Norte), southern Italian (Calabria, Puglia, Sardegna and Sicilia), Czech (Severozápad and Moravskoslezsko) and Hungarian (Dél-Alföld and Észak-Magyarország) regions as well as some regions in Spain (Extremadura and Castilla-La Mancha), including some with GDP per head above the EU average (Illes Balears, in particular). Although the last is very much an exception, it demonstrates that there is by no means a perfect relationship between the synthetic indicator and the level of regional prosperity.

Nevertheless, the relationship is relatively close (the correlation coefficient being 0.59), suggesting that innovative performance and economic performance are closely linked. According to a recent study[42], in almost half the regions with GDP per head above 75% of the EU average, there was a positive relationship between innovation and economic performance. In almost a quarter, however, a relatively high level of innovative capacity was not translated into a similarly high level of GDP per head. In these regions, therefore, the data suggest that policy intervention should perhaps focus on the implementation of more effective mechanisms of technology transfer so as to link businesses more closely with universities and other research centres with the aim of ensuring that innovations are more effectively exploited.

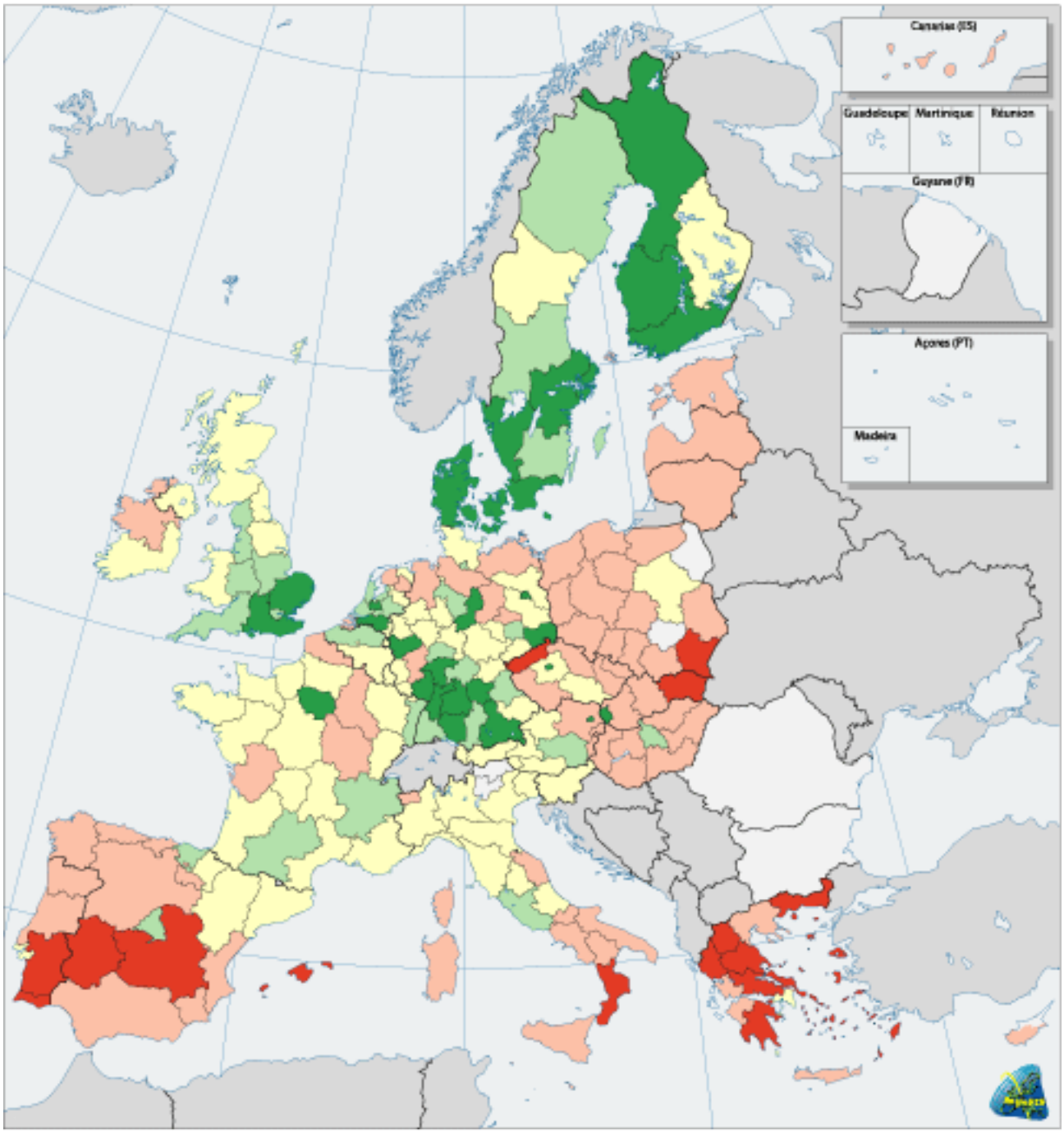
At the same time, in a third of the regions, GDP per head is relatively high despite innovative capacity — or at least the synthetic indicator of this — being relatively low. These regions include, in particular, many in northern Italy (Emilia-Romagna, Veneto, Trento and Bolzano) and a number in Austria (Tirol and Salzburg) as well as Luxembourg, in all of which the relative number of people who have completed

39 2006 RIS by Hugo Hollanders from MERIT (Maastricht Economic and social Research and training centre on Innovation and Technology), November 2006. Study commissioned by DG ENTR.

40 Human resources in S&T-core (% of population) — 2003; Participation in life-long learning (% of population aged 25–64) — 2003; Public R&D expenditures (% of GDP) — 2002; Business R&D expenditures (% of GDP) — 2002; Employment in medium-high and high-tech manufacturing (% of total workforce) — 2003; Employment in high-tech services (% of total workforce) — 2003; EPO patents applications per million population — 2002. These are the only individual indicators for which regional data are available.

41 It takes account of the ranking of individual regions in relation to both the EU-25 average and the average of the country in which they are located.

42 "Policy guidelines for regions falling under the new RCE objective for the 2007–2013 period", December 2005.



1.24 Regional Innovation Performance Index, 2002-2003

best performers
above average performers
average performers
below average performers
poor performers
no data

BE, DE4, PL4, PL5, PL6, UK: NUTS1

Source: DG Enterprise

0 500 Km

tertiary education, in particular, is significantly smaller than in similarly prosperous regions. This might be an early warning of problems to come and an indication that present high levels of GDP per head might not be sustainable without increased investment in human resources and other dimensions of the innovative base.

More and better jobs

Education

Education levels critical for economic development

The competitiveness of the EU economy and hence its capacity for achieving and sustaining acceptable rates of growth depends increasingly on the know-how of the labour force. A key part of the Lisbon strategy is, accordingly, to increase the education levels of people of working age and to make life-long learning a reality. This is as important in individual regions as in the EU as a whole, since balanced economic development, which is key to achieving higher growth rates over the long-term in the EU economy, depends on the competitiveness of each region and, therefore, on its human resources.

There remains, however, substantial disparities in the educational attainment levels of the work force across the EU. This applies both to the proportion of people with at least upper secondary education — i.e. those who successfully completed education or training programmes of at least three years duration beyond basic schooling — and to those with tertiary qualifications, i.e. with university degrees or the equivalent. The relative number of the latter is especially important, since many of the most dynamic sectors of activity are dependent on the ability and know-how of university graduates, and their capacity to absorb new knowledge and learn new skills. This number, however, varies markedly both between different parts of the EU and between regions within countries and represents a major potential constraint on their capacity to initiate and sustain economic development and to attract business investment. Moreover, there is little sign of the extent of this variation being reduced.

Education levels vary markedly across the EU

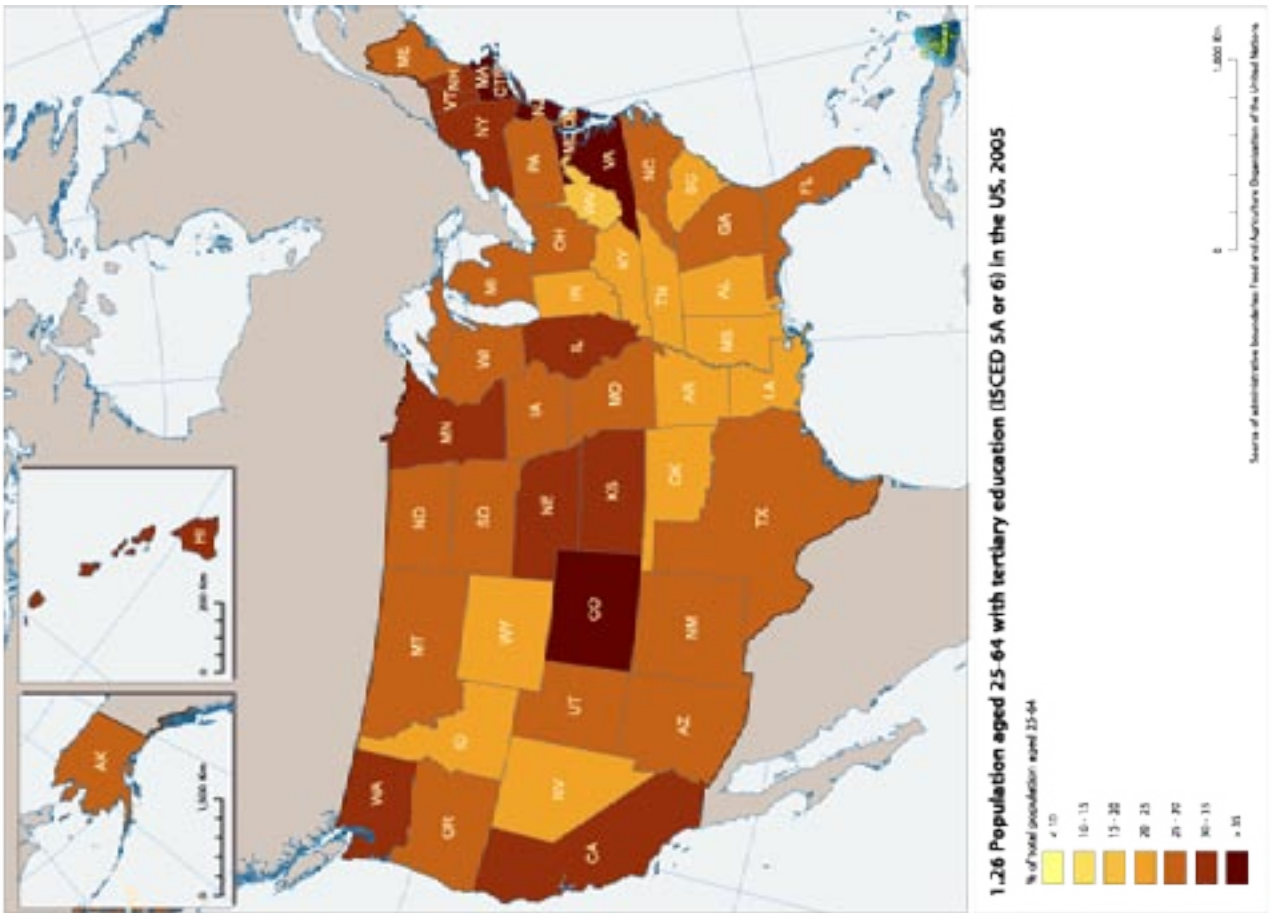
In the EU as a whole, some 23% of people aged 25–64 have tertiary level education (according to the data for 2005), while a further 46% have upper secondary qualifications, leaving 31% with no qualifications beyond basic schooling. The proportion with tertiary qualifications, however, is significantly larger among the younger generation than among older people, reflecting the progressive rise in participation in university education over time. Some 28% of young people aged 25–34, therefore, have university degrees or the equivalent in the EU, almost twice the proportion of those aged 55–64.

This increase in education levels over time has been particularly marked for women, who in the past tended to have significantly lower education levels

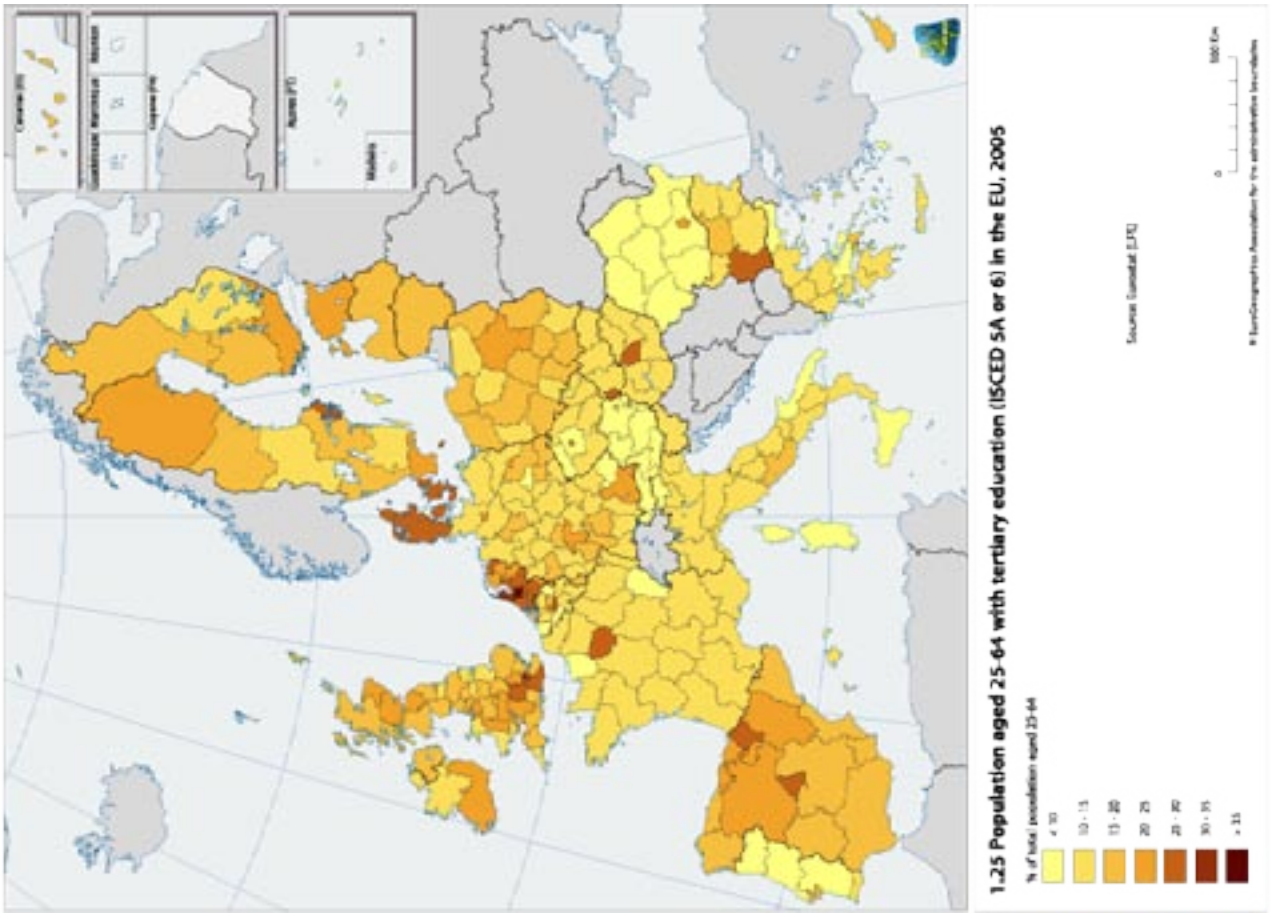
The education gap between the US and the EU

In the US, the share of people aged 25–64 with a tertiary education was 39% in 2005 compared to only 23% in the EU-27; in Finland, which has the largest share in the EU, it was only 35%. Focussing on those who have completed university education exclusively and excluding those with equivalent tertiary education (i.e. those with ISCED 5B qualifications), also shows the US at a considerably advantage with 29% of those aged 25–64 with a university degree, while in the EU, the figure was only 16%. The only two EU Member States that come close to matching the US figure are the Netherlands (28%) and Denmark (26%).

The regional variation in the share of university educated residents is considerable (Maps 1.25 and 1.26). In the US, of the 50 States and Washington DC, 18 had a share over 30%, while in the EU only three of the 264 NUTS 2 regions (no data for the four French DOMs) reached this level — Noord-Holland (37%), Inner London (36%) and Utrecht (34%). In the US, the top three States are Washington DC (49%), Massachusetts (40%) and Connecticut (38%). West Virginia had the smallest share with only 19%, while in the EU-27, the smallest share was 5% in Burgenland in Austria. In the US, only one in four States had a share under 25%, in the EU, this was the case in nine out of ten regions.



1.26 Population aged 25-64 with tertiary education (ISCED 5A or 6) in the US, 2005

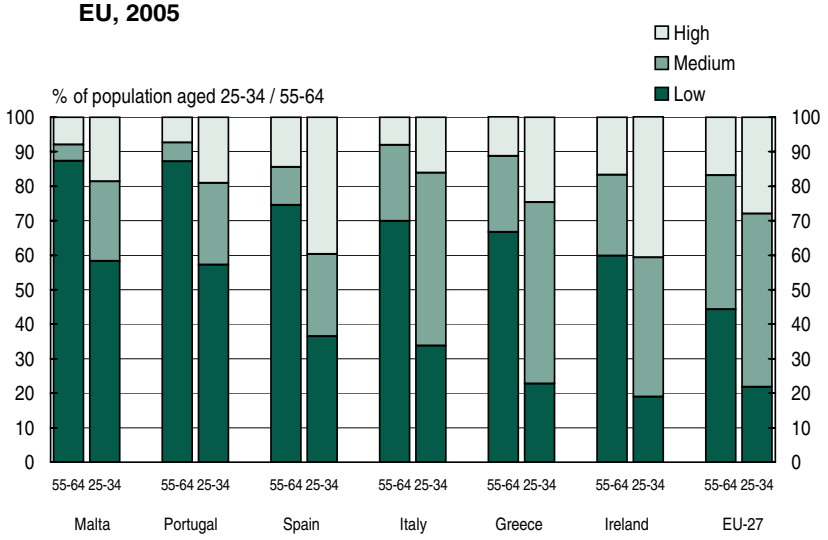


1.25 Population aged 25-64 with tertiary education (ISCED 5A or 6) in the EU, 2005

than men but who increasingly among younger age groups have overtaken men.

Among those aged 25–64, therefore, the proportion of women with tertiary education is slightly smaller than that of men in the EU as a whole (22.2% as opposed to 22.6%). Among those aged 55–64, however, the proportion of women with tertiary education is over six percentage points lower than for men. By contrast, 30% of women aged 25–34 have tertiary qualifications as compared with under 25% of men. The proportion of women who have completed tertiary education is, therefore, increasing at a much faster rate than for men.

1.28 Population by education level in the Cohesion countries and the EU, 2005



Source: Eurostat

The regional variation within the EU and within many MS is also high. With the exception of Germany, virtually all regions have more women aged 25–34 with tertiary qualifications then men. In many regions, the share of women in this group is more than 50% higher than men. This is the case in Slovenia, Estonia and Latvia all regions in Bulgaria and Finland and almost all regions in Portugal. Most of the other Member States have one or more regions where the share of women aged 25–34 is 50% higher than the share of men with tertiary qualifications, including in Germany (Map 1.27).

The proportion of those aged 25–64 with tertiary qualifications ranges from almost 35% in Finland, just under 34% in Estonia and 33% in Denmark to 13% in the Czech Republic and Portugal and 12% in Italy and Malta, while in Romania, it was only 11%. The proportion with upper secondary education varies equally widely and differently from the proportion with tertiary education. The relative number with either upper secondary or tertiary education is smallest in Portugal and Malta, at just 26%, while in Spain and Italy, it is under 50%. In Portugal and Malta, therefore, almost three-quarters of people in this age group have no education beyond compulsory schooling and in Spain and Italy, over half.

Comparing the education level of those aged 25–34 with those aged 55–64 shows that in Spain, Greece, Italy and Ireland, the proportion with no education beyond compulsory schooling more than halved in the 30 years between the two age groups (Fig 1.28). The reduction in Malta and Portugal was less and in both, the proportion of those aged 25–34 with no education beyond compulsory schooling is still almost three times the EU average. The increase in tertiary education was even mor marked, with Spain and Ireland surpassing the EU average in one generation, with approximately 40% of those aged 25–34 having this level of education.

In the Czech Republic, on the other hand, the proportion with at least upper secondary education is around 90%, and only slightly less than this in the three Baltic States, Poland and Slovakia, larger than in any of the EU-15 countries. Indeed, in all the new Member States, apart from Cyprus and Malta, the relative number of people of working age with at least upper secondary level education is above the EU average. In most cases, however, this is because of the large number with upper secondary education, and the proportion with tertiary education is below the average, in some cases considerably.


1.27 Gender balance of population with tertiary education, 2005
Ages 55-64
Ages 35-54
Ages 25-34
Women / men (as %)
< 50
50 - 70
70 - 90
90 - 100
100 - 110
110 - 130
130 - 150
>= 150
no data
Source Eurostat

Except in the three Baltic States, therefore, relatively few young people in the transition countries go on to university once they have completed upper secondary education or training. This feature is perhaps more significant in respect of labour market needs and as an indicator of human resources — or the 'quality' of the work force — in these countries than the proportion with upper secondary or higher levels of education, especially given the nature of many upper secondary programmes. These, therefore, tend to be relatively narrowly focused on specific occupations and not necessarily in line with the skills required as the economy develops and the structure of production alters. Nor do they typically provide a sound basis for people to be able to adapt to changes in the pattern of demand for labour as economic development takes place.

Variations more pronounced between regions than between countries

These differences in education levels between countries are even more marked at regional level since there are significant disparities within Member States as well as between them (Map 1.28). The relative number of university graduates, in particular, varies considerably between regions. This variation is correlated with GDP per head. Lagging regions tend to have a much smaller proportion of people who have completed tertiary education than others. In these regions taken together, 14% of those aged 25–64 had tertiary level qualifications in 2005. By contrast, the proportion in the other regions averaged just over 25%, almost 10 percentage points higher.

This difference is repeated in all Member States, with the sole exception of Germany, where the eastern German Länder have a larger proportion of university graduates than the western ones. In Greece, the proportion of graduates in the population aged 25–64 was over 5 percentage points less in lagging regions than in the other parts of the country and in Portugal, as much as 9 percentage points less. In Italy, the difference was smaller — only 2 percentage points — though this means that only just over 10% of 25–64 year-olds had completed tertiary education in the southern regions.

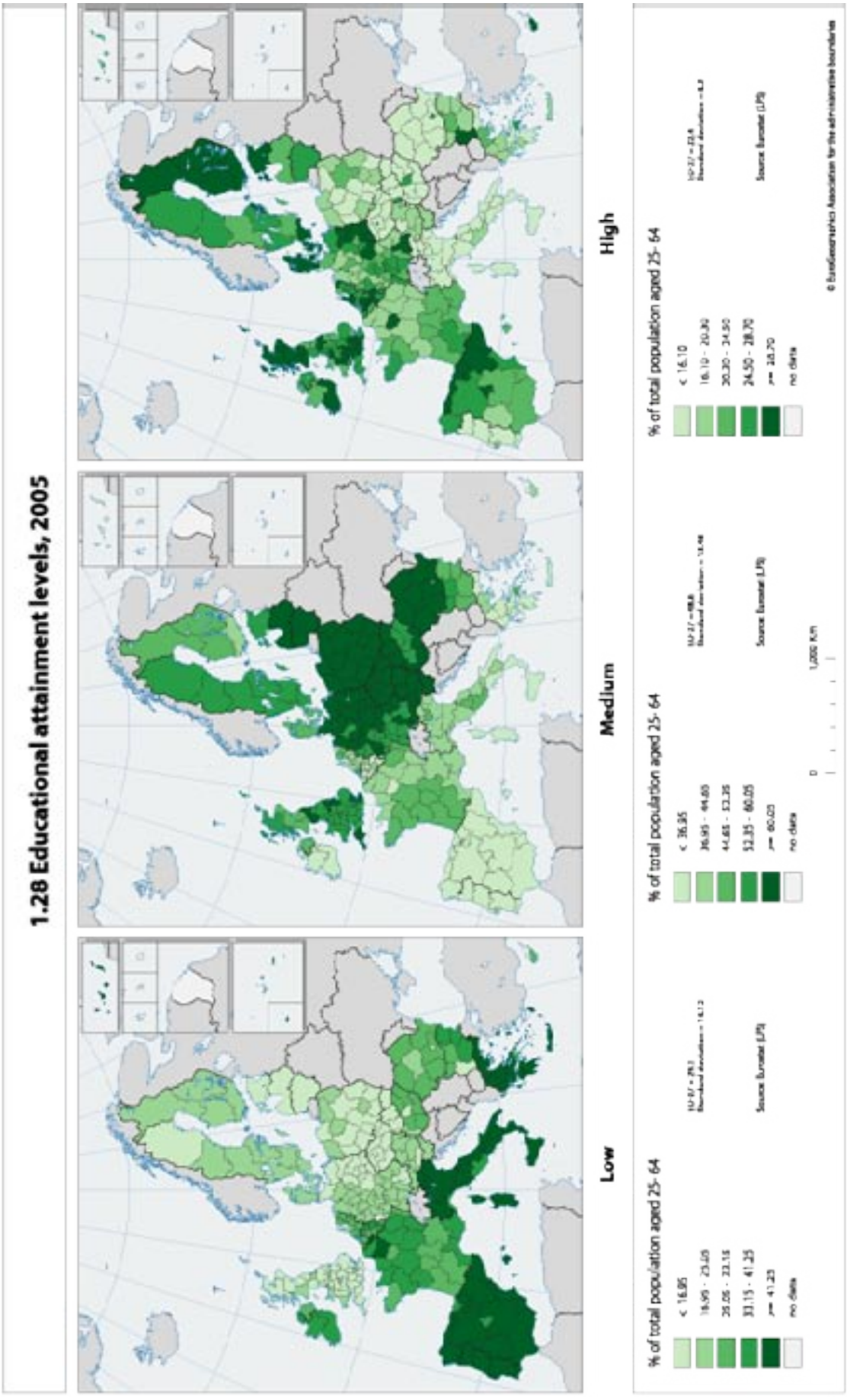
The difference between the more and less prosperous regions is particularly pronounced in the new Member States, especially between the capital cities and the rest of the country. In the Czech Republic, Hungary, Slovakia and Romania, the relative number of university graduates in the regions which include the capital city was over twice that in others (in the Czech Republic and Hungary, for example, some 27% as opposed to 11% and 13%, respectively).

Educational levels in lagging regions remain low

There is little sign of these differences narrowing. Indeed, the difference in the proportion of people with tertiary education in lagging regions compared to the other regions is slightly wider among younger age groups than among older ones. In the lagging regions, the proportion of those aged 25–34 with tertiary education was 8 percentage points higher than of those aged 55–64, but in the other regions the difference was 13 percentage points. This illustrates the growing gap between the lagging regions and the rest of the EU in tertiary education.

A similar pattern is evident in several Member States. In Poland, for example, the proportion of those aged 25–34 with tertiary education was 12 percentage points higher than those aged 55–64 in lagging regions, but in the other regions the difference was 18 percentage points. In Italy, where the proportion of 25–34 year olds with tertiary education in lagging regions was 5 percentage points more than for those aged 55–64, the figure for the northern and central regions was almost 9 percentage points more.

This lack of convergence, it should be noted, does not necessarily reflect a lack of effort on the part of government at various levels, from regional to EU, to close the gap. Instead, it might be a result of those with high levels of education, especially the younger generation, migrating out of the less prosperous regions to the more prosperous ones where their potential earnings are higher, so adding to the number


1.28 Educational attainment levels, 2005
Low
Medium
High
% of total population aged 25- 64
Source Eurostat (LFS)
1,000 Km

of university graduates in the latter regions and reducing it in the former.

Employment rates lower for less well educated

The importance of tertiary education for regional competitiveness and the capacity for growth is reflected in the uniformly high employment rates of university graduates which prevail across the EU. Some 84% of those aged 25–64 were in work in the EU as a whole in 2005, the proportion varying from a high of 88% in the UK and Lithuania to a low of 81% in Italy and Bulgaria.

The variation is slightly wider across regions. Nevertheless, there are no regions in the EU where the proportion of university graduates in employment fell below 70% and only 6 where it fell below 75%, four of these being in southern Italy, reflecting the generally low employment rates among women (the other two were Corse and Mecklenburg-Vorpommern in Germany).

By contrast, the employment rate of 25–64 year-olds with no education beyond basic schooling averaged just 56%, 28 percentage points below the rate for graduates. It was over 75% in only two regions in the EU, both in the UK (Berkshire, Buckinghamshire and Oxfordshire and Essex), while it was below 25% in four regions (Severozapaden in Bulgaria, Slaskie in Poland, Leipzig in Germany and Vychodne Slovensko in Slovakia).

Although there are differences in employment rates among those with upper secondary education, these tend to be much narrower, varying from around 80% or just over to around 60% (there is only region, Corse, where the rate was below 55% in 2005). The main manifestation of the variation in employment rates across the EU described earlier in the chapter, therefore, is the difference in the proportion of those with no qualifications beyond basic schooling who are in work.

Employment rates among such people are particularly low in the new Member States (averaging just over 49% in 2005), especially in countries where the employment rates are relatively low overall. The average rate for those aged 25–64 with only basic schooling, therefore, was only 38% in Hungary, 37% in Poland and just 26% in Slovakia, though in the last two, there were only around 20% of the age group with this level of education.

Lifelong learning

Continuing participation in education and training throughout people's working lives is essential for them to be able to adapt to new techniques and new methods of working and to extend their competencies as technological advance takes place. It is equally important for them to be able to move between jobs as the demand for labour shifts in response to changes in the structure of economic activity as economic development occurs.

The extent of lifelong learning, however, varies markedly between both countries and regions. In 2003, the last year for which data are available for participation in training over a 12-month period, an average of some 21% of those aged 25–64 were involved in some education or training, mostly outside the formal education system. This proportion, however, varied from over 60% in Sweden and over 50% in Denmark and Finland to only just over 6% in Greece and just 2–3% in Bulgaria and Romania. Despite the evident importance of lifelong learning in the new Member States to facilitate movement between activities as restructuring occurs, in all the countries apart from Slovenia and Slovakia, it was less than the EU average, in Lithuania, Hungary and Poland, significantly so.

Participation in education and training was also below the EU average in each of the EU-15 Cohesion

Countries, as well as in Italy, where the proportion concerned was under 10%.

Lisbon Agenda for the regions

To obtain a regional perspective on the Lisbon Agenda, a synthetic index[43] has been created based on six of the short-listed Lisbon indicators relevant at the regional level[44] (Map 1.29). Although it is intended only to provide a rough indication of how regions are performing in relation to the Lisbon Agenda, it is nevertheless the case that, a region which scores high will be well on its way to achieving several of the Lisbon targets, while a region with a low score will be a long way off.

Regions with a particularly high score include Denmark, most Swedish regions, Etelä-Suomi in Finland (where Helsinki is situated), regions in the South-East of the UK, Noord-Holland and Bayern in Germany. All of these regions were ranked in the top quintile as regards at least five of the six indicators. The regions with the lowest scores can be found in Romania, Poland and Slovakia, where this reflects a combination of low productivity, low employment and low expenditure on R&D.

Among the new Member States, Cyprus, Estonia, Lithuania, Slovenia and most of the Czech regions scored above the EU average. In Slovakia and Hungary, the regions which included the capital city had scores above the average, while in other regions in the two countries, scores were below average, in

Turkey and Croatia

The population of Turkey now amounts to around 15% of that of the EU-27. Because of its much faster population growth since 1990 (more than 8 times faster than in the EU-27), the share of population under 15 is almost twice that in the EU, while the share of those aged 65 and over is only a third of the proportion in the EU.

In the four years 2001–2004, economic growth in Turkey was faster than in the EU and GDP per head in PPS terms increased from 27% of the EU-27 average to almost 30% — very close to the level in Bulgaria or Romania. This relatively low level is a consequence of much lower productivity than in the EU, partly reflecting the large numbers employed in agriculture (34% of the total) and just as importantly, of much lower employment (only 46% of those aged 15–64 being in work in 2005). This is only partially reflected in unemployment (just over 10% in 2005) because of the great many people who are not economically active, women especially (the employment rate of women is under 24%).

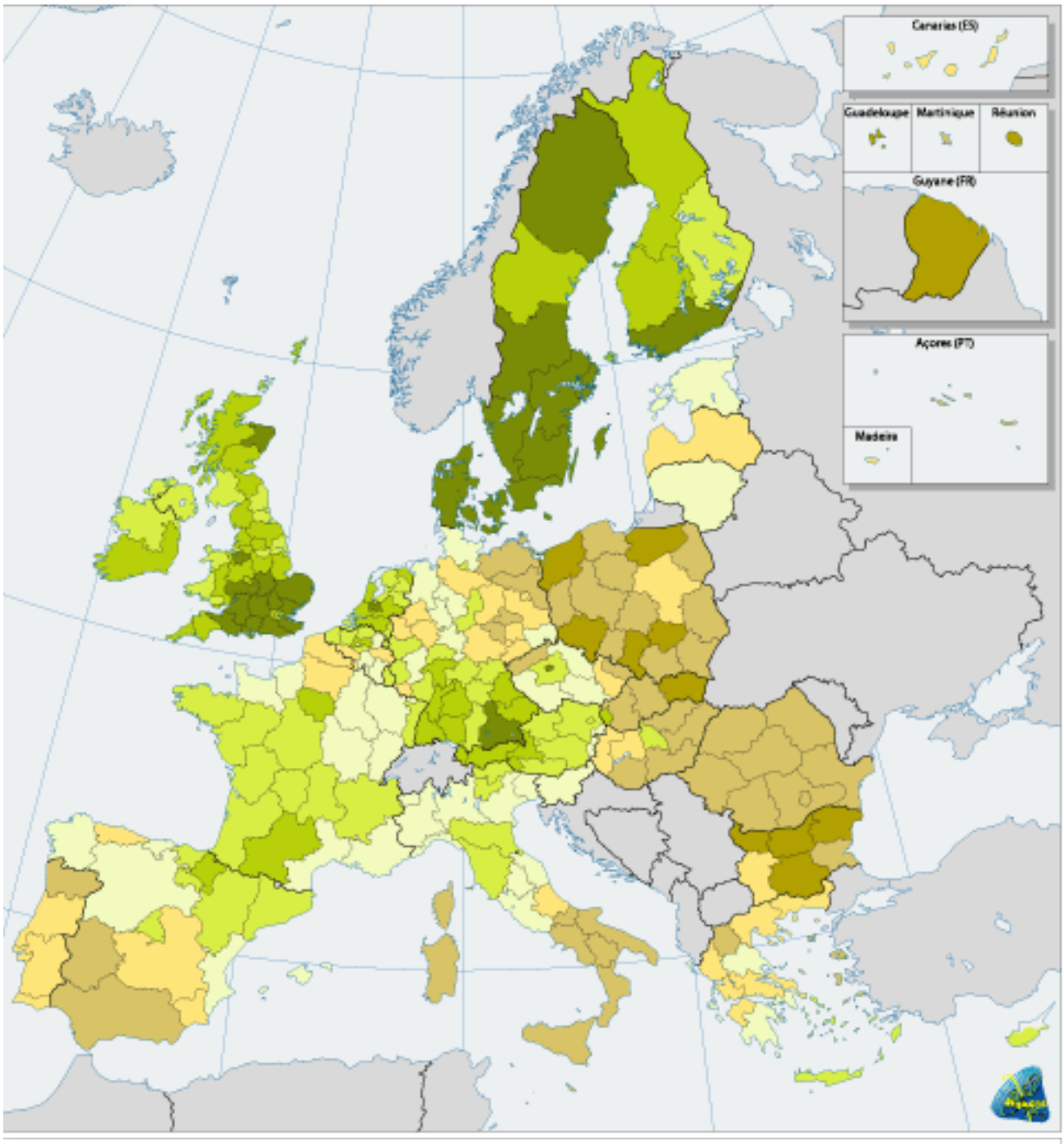
R&D expenditure amounts to only 0.7% of GDP and under a third of this is undertaken by businesses. Regional disparities across the country are extremely wide and show a clear West-East divide, the most prosperous region, Kocaeli, having a GDP per head of 51% of the EU-27 average in 2001 and the least prosperous, Aðrý, one of only 9%. Nevertheless, disparities seem to have narrowed (on the basis of the Gini coefficient) between 1995 and 2001.

The population of Croatia is under 1% of the EU-27 total and has tended to decline in recent years (by 0.6% a year over the period 1995–2003). The age structure of population is much the same as in the EU.

Economic growth has been relatively high, averaging 4% a year between 1995 and 2004, and in 2004, GDP per head was just under 49% of the EU-27 average, much the same as in Poland. Both productivity and employment are much lower than in the EU, the employment rate being only 55% in 2005 and unemployment almost 13%, while some 17% of those in work are employed in agriculture.

Expenditure on R&D was just over 1% of GDP in 2003, slightly higher than the average in the new Member States, and 40% was carried out by business.

Regional disparities in GDP per head are relatively wide, the level in Zagreb being some 86% of the EU-27 average in 2003 in PPS terms, around twice the level in the rest of the country. In North-West Croatia, GDP per head averaged just over 61% of the EU average, while in East (Panonian) Croatia, it averaged just under 34%.



1.29 Lisbon Economic Indicators, 2004-2005

Average of re-scaled values relative to the EU-27 mean

- 0.00 - 0.20
- 0.20 - 0.40
- 0.40 - 0.50
- 0.50 - 0.60
- 0.60 - 0.70
- 0.70 - 0.80
- 0.80 - 1.00
- no data

GDP/person employed, in PPS
Employment rate, ages 15-64
Employment rate, ages 55-64
GERD as percentage of GDP
Long term unemployment as % of total labour force
Youth educational attainment level (% of population aged 20-24 having completed at least upper secondary education)

Sources: Eurostat, DG REGIO

0 500 Km

some cases, considerably so. There are also large differences in the scores between regions in Spain, Italy and Germany, with southern Spanish and Italian regions and eastern German regions all having low scores, highlighting both the pronounced economic disparities within these countries and the importance of the regional dimension of the Lisbon Agenda.

Virtually all the regions which score below the EU average on this synthetic indicator have GDP per head below 75% of the EU average, demonstrating the importance of Cohesion policy and the financial support it provides for the pursuit of the Lisbon Agenda.

Chapter 2 — The impact of cohesion policy

Table of content

Introduction

This chapter examines the main achievements of cohesion policy in the period 2000–2006, particularly in terms of the structure of spending under cohesion policy and of growth and jobs. It then presents the main elements of the reform for the period 2007–2013 and a preliminary assessment of the content of the new programming documents.

The chapter is based in large part on the results of the latest evaluations of programmes in the EU-15 countries, the first evaluations of programmes in the new Member States and three studies, one each on transport, innovation and the environment.

Evolution of priorities during the period 2000–2006

Cohesion policy is aimed at supporting three main areas of investment: infrastructure (mainly transport and the environment), productive investment (largely SMEs and RTD and innovation) and investment in people.

Over the period 2000–2006, investment was concentrated in these three areas in both Objectives 1 and 2, though with differing emphasis. Whereas in Objective 1 regions, the focus was on basic needs, on infrastructure (particularly transport infrastructure) and human resources, in Objective 2 regions, investment was centred more on 'soft' infrastructure, particularly on aid to SMEs and RTD. Objective 3 was dedicated in turn to human resources (Table 2.1).

The division of actual expenditure from the Structural Funds (the ERDF and the ESF) tended to closely follow the division planned at the beginning of the programming period, with only minor differences, demonstrating both the relevance of the initial plans and the fact that most programmes are on target:

- Transport in Objective 1 regions accounted for around 26% of total expenditure as against 20% of planned. Although large capital projects can be challenging to launch and keep to timetable, once going they have a certain momentum.
- Environmental spending in Objective 1 regions was slightly lower than that planned expenditure (6.6% of the total as against 7%). This is perhaps attributable to the fact that environmental infrastructure, such as water and waste water treatment facilities, has in general been completed, with the emphasis in the EU-15 shifting to awareness-raising and other preventative measures as well as to renewable energy.
- Aid to SMEs in Objective 2 regions was lower than planned (32% of the total as against 35%), which as some of the evaluations noted, might be a consequence of the economic downturn.
- Investment in people, notably in Objective 1 regions and under Objective 3, accounted for approximately 30% of total cohesion policy resources. On the whole absorption has been in line with expectations.

In the new Member States, it is too early to determine trends in the pattern of actual expenditure, but the planned figures show a similar picture to that in Objective 1 regions in the EU-15, with large investment in transport and human resources, though with proportionally less in SMEs and RTD. The latter might be attributable to the shortness of the 2004–2006 programming period in these countries and its initial nature, given the length of time it takes to build up expertise in these areas.

Expenditure under the Cohesion Fund was equally distributed between environment and transport infrastructures (Table 2.2).

In relation to progress against targets, the mid-term updates generally found that most programmes were on track on most indicators, including job creation, SMEs assisted and kilometres of road and railway constructed. Indeed, some programmes exceeded the targets set by some way, which might imply a need to set more ambitious targets in future. The main exception is Greece, where the achievement of targets for business creation and rural development was offset by a failure to do so as regards infrastructure and some training measures. In some areas, notably investment in in-

2.1 Distribution of Cohesion policy spending by domain in the EU-25, 2000–2006

	Objective 1		Objective 2		Objective 3		Community initiatives		Total	
	EUR million	%	EUR million	%	EUR million	%	EUR million	%	EUR million	%
Agriculture	97	0.1	19	0.1	21	0.1	16	0.3	153	0.1
Rural development	569	0.6	401	2.4	0	0.0	254	4.7	1,225	0.9
Large business	2,869	3.2	3934	2.4	2	0.0	16	0.3	3,279	2.5
SMEs	10,329	11.4	5,247	31.8	24	0.1	371	6.9	15,972	12.3
Tourism	2,852	3.1	1,569	9.5	22	0.1	277	5.2	4,720	3.6
RTD and innovation	4,936	5.4	1,634	9.9	5	0.0	154	2.9	6,729	5.2
Other productive environment	125	0.1	22	0.1	2	0.1	38	0.7	207	0.2
Productive Environment	**21,777**	**24.0**	**9,285**	**56.2**	**96**	**0.6**	**1,126**	**20.9**	**32,285**	**24.9**
Labour market policy	7,619	8.4	283	1.7	5,317	31.2	374	7.0	13,593	10.5
Social inclusion	3,336	3.7	326	2.0	3,384	19.9	469	8.7	7,514	5.8
Educational and vocational training	7,472	8.2	385	2.3	3,694	21.7	252	4.7	11,802	9.1
Enterpreneurship	4,318	4.8	539	3.3	3,100	18.2	525	9.8	8,483	6.5
Labour market actions for woman	1,292	1.4	91	0.6	1,099	6.4	229	4.3	2,711	2.1
Other Human Resources	55	0.1	90	0.5	15	0.1	128	2.4	288	0.2
Investment in people	**24,092**	**26.5**	**1,714**	**10.4**	**16,609**	**97.4**	**1,977**	**36.8**	**44,392**	**34.2**
Transport	23,448	25.8	977	5.9	0	0.0	490	9.1	24,914	19.2
Telecommunications infrastructure	3,153	3.5	493	3.0	65	0.4	327	6.1	4,038	3.1
Energy	776	0.9	140	0.8	0	0.0	44	0.8	960	0.7
Environment	6,019	6.6	704	4.3	0	0.0	143	2.7	6,865	5.3
Planning and rehabilitation	5,179	5.7	2,145	13.0	0	0.0	410	7.6	7,734	6.0
Social infrastructure and public health	4,637	5.1	206	1.2	3	0.0	91	1.7	4,938	3.8
Other Infrastructure	0	0.0	148	0.9	0	0.0	0	0.0	148	0.1
Basic Infrastructure	**43,212**	**47.6**	**4,812**	**29.1**	**69**	**0.4**	**1,505**	**28.0**	**49,598**	**38.2**
Miscelllaneous	**1,734**	**1.9**	**715**	**4.3**	**270**	**1.6**	**768**	**14.3**	**3,487**	**2.7**
Total	**90,815**	**100.0**	**16,526**	**100.0**	**17,044**	**100.0**	**5,376**	**100.0**	**129,762**	**100.0**

Source: European Commission, Certified expenditure for the period 2000–2006, ERDF and ESF only (cut off date: April 2007)

2.2 Cohesion Fund (committed spending), 2000–2006

	EUR million	%
Sewerage and purification	6,521.8	37.5
Environment - n.e.c.	4,293.0	24.7
Urban and industrial waste	2,847.9	16.4
Drinking water (collection, storage, treatment and distribution)	2,758.6	15.9
Mixed water and waste water projects	895.5	5.1
Environment protection (Flood protection, desertification, affrestation, Natura 2000, etc.)	63.1	0.4
Air	9.0	0.1
Total Environment	**17,389.0**	**50.3**
Rail	7,808.0	44.9
Roads	4,729.5	27.2
Other not classified	2,772.8	15.9
Ports	1,077.2	6.2
Urban Transport	422.1	2.4
Airports	70.5	0,4
Total Transport	**16,880.1**	**48.8**
Urban transport	286.9	90.5
Other	30.0	9.5
Total Mixed projects	**316.9**	**0.9**
Total Cohesion Fund	**34,585.9**	**100.0**

Source: European Commission

frastructure and research, expenditure has, however, also lagged behind that planned in a number of other Member States. In addition, in a number of cases, the evaluations refer to the need to improve administrative capacity, an issue which is discussed further below.

Impact analysis — the value of cohesion policy

Macroeconomic impact: 2000–2013

Macro-economic models provide important insights into the consequences of cohesion policy since, in principle at least, they are able to take account of the substitution, crowding out, multiplier and dynamic effects of policy, so enabling the net effects over the long-term to be estimated.

The analysis presented below is based on actual payment profiles[1] for the largest blocks of Cohesion programmes in the 2000–2006 period — those in Ireland, Greece, Spain and Portugal as well as in Eastern Germany (including Berlin) and the Objective 1 regions of Italy. The profiles comprise payment claims up to and including 2006, with the budget remaining assumed to be divided equally between 2007 and 2008. They are taken as the best estimate of the pattern of expenditure over the period 2007–2013.

These profiles, which are a more realistic representation of actual spending than annual budget allocations, indicate that outlays tend to build up slowly as programmes are set up and then rise rapidly to a relatively constant level before increasing at the end of the period. In addition, the simulations reported here incorporate only the effects of the EU contribution. The pattern of national spending is assumed to remain unchanged, which seems plausible given that most co-financing will come from money already earmarked for the spending in question.

It is also worth noting that the models provide estimates of the long-term effects of the policy beyond the funding period 2007–2013.

The following examines the prospective effects of spending on GDP and employment on the basis of three different economic models.

The HERMIN[2] model shows cohesion policy as having a significantly positive effect, with absolute GDP being some 5–10% higher in most of the new Member States than in the absence of intervention. The job content is high, with 2 million net additional jobs predicted by 2015 (Tables 2.3a and 2.3b and Fig. 2.1).

Some of these gains are due to short-run demand effects, in the form, for example, of a temporary boost to construction. However, around half of the increase in GDP is attributable to supply-side effects, which are important to sustain higher growth rates over the long-term. These take the form of increases in physical and human capital and R&D, which serve to push up productivity and growth potential.

1 This differs from the estimates in previous Cohesion Reports which were based on annual allocations rather than payments, or more precisely payment claims lodged with the Commission which will tend to lag actual spending by at least two months

2 Bradley, Untiedt and Mitze (2007) "Analysis of the Impact of Cohesion Policy"

2.3a HERMIN: Effect of cohesion policy 2000–2006 on national GDP and employment in 2006

Country	GDP gain (% above baseline)	Employ-ment gain (% above baseline)	Employ-ment gain (1000s above baseline)
Bulgaria	:	:	:
Czech Republic	1.6	0.8	39.4
Estonia	1.8	1.3	7.9
Ireland	0.9	0.7	12.9
Greece	2.8	2.0	85.2
Spain	1.0	0.7	133.5
Cyprus	0.1	0.1	0.4
Latvia	1.6	1.2	11.7
Lithuania	1.2	0.9	12.4
Hungary	0.6	0.6	22.1
Malta	0.4	0.4	0.6
Poland	0.5	0.4	50.3
Portugal	2.0	1.4	70.6
Romania	:	:	:
Slovakia	0.7	0.5	11.3
Slovenia	0.3	0.3	2.3
Eastern Germany	0.9	0.7	53.0
Italian Mezzogiorno	1.1	0.8	55.7
Total			569.3

Source: GEFRA, EMDS (2007)

2.3b HERMIN: Effect of cohesion policy 2000–2013 on national GDP and employment in 2015

Country	GDP gain (% above baseline)	Employ-ment gain (% above baseline)	Employ-ment gain (1000s above baseline)
Bulgaria	5.9	3.2	90.4
Czech Republic	9.1	7.1	327.8
Estonia	8.6	5.4	31.0
Ireland	0.6	0.4	8.2
Greece	3.5	2.3	95.0
Spain	1.2	0.8	156.7
Cyprus	1.1	0.9	3.1
Latvia	9.3	6.0	55.4
Lithuania	8.3	4.8	67.7
Hungary	5.4	3.7	147.3
Malta	4.5	4.0	6.9
Poland	5.4	2.8	384.2
Portugal	3.1	2.1	104.8
Romania	7.6	3.2	267.5
Slovakia	6.1	4.0	87.9
Slovenia	2.5	1.7	15.7
Eastern Germany	1.1	0.9	60.0
Italian Mezzogiorno	1.5	0.9	60.1
Total			1969.7

Source: GEFRA, EMDS (2007)

Both short- and long-term effects can be seen in the interim results. The effect in 2006 of cohesion policy for the period 2000–2006 is particularly influenced by demand-side effects, since spending resulting from policy over this period will only be completed in 2008. Moreover, the effect does not take account (for the EU-15 Member States) of supply-side effects stemming from policy in previous periods. Nevertheless, the total employment effect across the recipient countries is around 570,000, of which some 160,000 is in the new Member States.

For 2015, the effect is much greater. This is partly because financial support is more substantial relative to the GDP of the recipient countries, but also because supply-side improvements take time to build up. The estimated effect of policy on GDP is largest for the new Member States since they are the main recipients of support in relative terms. For these countries, as noted above, GDP is projected to be 5 to 10 % higher than without cohesion policy with an overall increase in employment of nearly 2 million Supply side improvements account for around half of the gain.

The projected effect of European support differs between countries, partly because of variations in the scale of funding, partly because of differences in the structure of the economy. The factors in HERMIN which have the most effect on growth are the sectoral structure of the economy, the degree to which manufacturing is open to productivity growth driven by technological advance, the openness to world trade and the flexibility of wages.

EcoMod[3] predicts significantly positive effects of policy intervention in all 15 Cohesion countries, especially in all the new Member States, where funding is relatively large. In Slovakia, Lithuania, Latvia and Bulgaria, GDP is estimated to be around 15% higher by 2020 as a result of intervention than it would be without it. The projections show the effect of policy being slightly

3 EcoMod (2007) "The economic impacts of convergence interventions 2007-13"

larger after 2015 than before because of higher productivity, a more educated work force and better infrastructure. The result of intervention is, therefore, to strengthen the supply side of the economy and put it on a higher sustainable growth path.

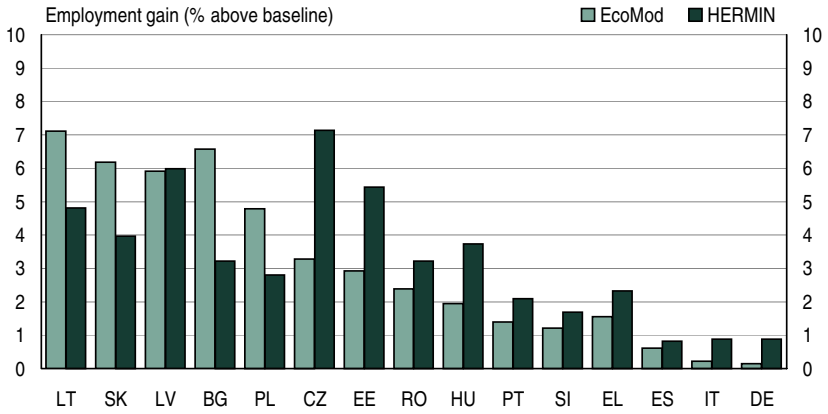
However, there are two notes of caution. First, continued improvement in growth rates beyond the funding period is likely to depend on other policies being implemented to make the most of supply-side improvements. Secondly, the scale of the effects is sensitive to the assumptions made about the elasticity of productivity growth to increases in the capital stock, which are relatively uncertain.

The effects differ between countries partly because of the scale of funding but also because of differences in the structure of economies, those with large agriculture and basic industry sectors gaining less than those with more services and higher-tech sectors.

The main engine of growth is investment in both physical and human capital. While all sectors gain from higher growth, the gains are particularly large in construction, because of infrastructure projects, and higher-tech activities, because of a more educated and skilled work force.

Employment increases are predicted to contribute around 40–50% of GDP growth in most cases, the remainder coming from higher productivity. Overall, policy is projected to create over 2 million net additional jobs by 2015, rising to nearly 2½ million by 2020, around a third of them in Poland, with consequent significant reductions in unemployment.

2.1 Effect of Cohesion policy spending on employment (horizon 2015)

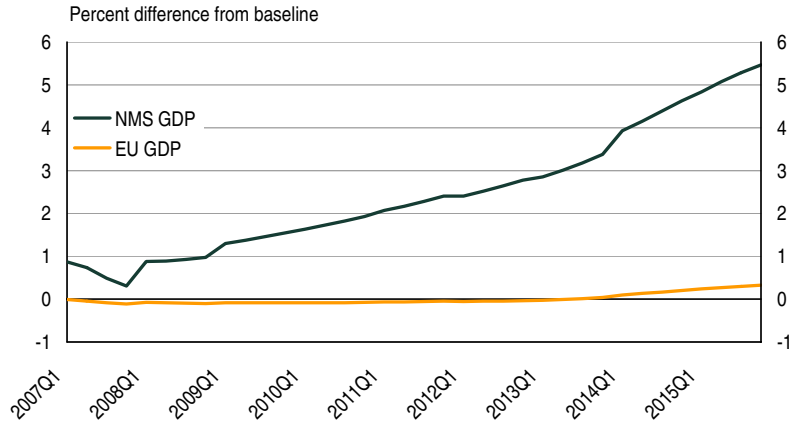


In HERMIN, estimates for IT confined to Mezzogiorno and in DE to Eastern Länder; in EcoMod, estimates relate to national economy

Source: EcoMod and Hermin

Since the QUEST model incorporates strong assumptions about the 'crowding-out' effect of policy interventions, the boost to demand in the Cohesion countries from spending from the Structural Funds is relatively modest (Fig. 2.2). Instead, there is a slow build-up of supply-side improvements, though these are reflected mainly in productivity gains, since the model assumes the job content of growth to be negligible. (This, it should be noted, though perhaps extreme, accords more closely than the other two models with the evidence of recent years in many of

2.2 QUEST: Effects of Cohesion policy spending in the EU, 2007-2015



Source: QUEST

the new Member States, as indicated in Chapter 1.) The nature of the gains, however, mean that for the most part they will remain in the long-term after the programming period, and funding, comes to an end. In practice, therefore, Quest tends to predict supply-side gains over the long-term similar to HERMIN.

In the QUEST model, differences between countries in the scale of the effect of policy reflect both the size of Funds' support relative to GDP and monetary policy. In Slovenia, which has adopted the Euro, and the three Baltic States, which peg their currencies against the Euro, there is less crowding out of the stimulus to demand in the first year but more in later years, so depressing the rate of growth. In the Baltic States, in particular, therefore, the predicted effect of cohesion policy is much less than indicated by the HERMIN model.

According to QUEST, the effect on the countries which are net contributors to cohesion policy is negative but relatively small, especially in relation to the positive effect on GDP in the Cohesion countries. For the EU-27, the overall effects are also predicted to be small and negative over most of the programming period, but positive in later years, indicating that cohesion policy adds to the growth of the EU as a whole in the long term, as well as assisting convergence.

In conclusions, there are evident differences in the estimated effect of policy in the different countries between the models, which reflect their differing features. This applies as much to the relative as to the overall scale of the effect, with, for example, policy having a comparatively large effect on GDP in Slovakia and Bulgaria according to EcoMod but a smaller one as compared with other countries according to HERMIN.

Although the detailed results differ, the three macroeconomic models used to assess cohesion policy predict that it will have a significant effect in boosting GDP in lagging regions of the EU not only over the present programming period but permanently. Two of the models estimate that policy will add some 5–15% to GDP in most of the new Member States by 2015 and around 2 million to employment.

In addition, the QUEST predicts that cohesion policy will increase the long-term productive potential of the EU as a whole, as well as assisting convergence.

Measuring employment effects using bottom-up approaches

It is not just the major Objective 1 programmes which have had an important effect on employment across the EU. According to estimates made by the latest evaluations of Objective 2 programmes (the updates to the mid-term evaluations), these too have led to significant job creation.

These estimates are based on "bottom-up" survey data and, unlike macroeconomic model estimates, count jobs gross of any which are displaced elsewhere in the economy. Moreover, each country has a different methodology for assessing job creation. Nevertheless, despite the over-statement of job gains and the limited comparability of the results across countries, the estimates are indicative of the employment effect of cohesion policy for investment in Objective 2 regions (Table 2.4).

For the six countries for which evaluations have been carried out, which account for some 54% of the Funds allocated to Objective 2, the estimates suggest the overall the creation of over 450,000 jobs in gross terms.

Some of the evaluations assessed the sustainability of the jobs created and their effect on the regional labour market. In the West Wales and the Valleys Objective 1 region, for example, survey evidence suggested that most of the 40,000 new jobs created were likely to be sustained and that around half of them were filled by people who had previously been unemployed or inactive rather than already in work, suggesting a net job gain of at least 20,000. The types of job created were broadly similar in terms of the occupational pattern to those already in existence in the region, though pay rates were generally lower.

In France, the mid-term evaluation suggests that, by April 2006, some 200,000 jobs are estimated to have been created nationally, some 75% of them perma-

Introducing the macroeconomic models used

HERMIN is a macro econometric model that combines both neo-classical and Keynesian elements to analyse in one framework both short-run (demand) effects and long run (supply-side) effects. Moreover, as a model specifically designed to measure the impact of cohesion policy, it has a sophisticated system for processing the different forms of spending under cohesion programmes.

EcoMod is a multi-sector, "recursive-dynamic" computable general equilibrium (CGE) model. It has a detailed representation of the structure of the economy, notably the behaviour and interaction of different sectors, different types of economic agent (households, firms, etc) and different types of economic behaviour (consumption, production, investment, etc). The model is therefore well-designed to capture structural shifts, trade effects and dynamic supply-side gains — a key aim of cohesion policy — but is not suitable for measuring short-term, year-on-year changes.

QUEST is an in-house Commission model. It is a global macro-econometric model based on the New Keynesian-Neoclassical synthesis, with strong micro-foundations and forward-looking agents. It has less sectoral detail than the other two, but the broadest geographical coverage, including all of the EU economies[a]. Alone among the models, it can therefore include the effects on the net donor economies to cohesion policy(and hence the effect of policy on the EU as a whole). It also has the most comprehensive coverage of the mechanisms by which "crowding out" occurs.

The common central feature of the macro-economic models is that investment in physical and human capital drives growth. In the QUEST model public investment is assumed to be as productive as private investment for the economy as whole, which may not be the case in a number of instances.

Although HERMIN and EcoMod have different structures and assign various "elasticities" (and therefore impacts) to different types of investment based on their own reading of the literature, a striking result is that all three models tend to produce similar supply-side effects over the period of assistance. All three models assume sound financial management and optimal investment choices, which again may well differ from reality.

One of the key differences between the models is the treatment of "crowding out". In QUEST economic agents are forward-looking and interest rates and exchange rates are endogenously determined. This tends to lead invariably to public investment crowding out private investment. Demand-side effects are therefore smaller than in the other two models (even at the peak of implementation) and final effects on employment equally small. In HERMIN, there is some crowding-out (through labour market tightening and loss of international competitiveness) but also crowding-in (the effect of the "Keynesian multiplier"). Demand effects are therefore significant and account for a large share of the overall impact.

The distinctive results of Ecomod after the programming period are generated by the inclusion of long-term dynamic gains. The long-term positive interaction between factors such as RTD and human capital investment are assumed to continue to generate high growth (and not just a higher level of GDP) beyond the lifetime of the support provided. This contrasts, in particular, with HERMIN's approach to RTD and innovation which is to assume only small effects on the grounds that there is much uncertainty about these in the current literature.

a Although models for Bulgaria and Romania are still being developed and they are currently covered in a more stylised form.

2.4 Job creation from Structural Funds support in Objective 2 regions, 2000 to 2006 period

	Gross job creation(1)	Number of unemployed(2)
	Thousand	
Denmark	5.5	16.8
France	200.0	787.5
Netherlands	75.0	64.5
Spain	38.0	140.0
Sweden	25.5	48.9
United Kingdom	106.5	359.2
Total	**450.5**	**1,416.9**

Source: mid-term evaluation updates and EUROSTAT (2005), calculations DG REGIO
(1) The exact cut-off date varied from one country to another. Most were around the beginning of 2005. Cut-off for France was April 2006.
(2) Where only part of a NUTS3 region is covered by Objective 2, estimates were made by pro-rating. The results are therefore approximate.

nent ones. Around 44% came from assistance to aid SMEs, 18% from aid to large enterprises and 5% each from support of R&D and tourism. Only 32% of the jobs, however, were taken by women. The report also found that, as of February 2005, some 144,500 of the jobs created since 2000 were still in existence.

In Denmark, in Objective 2 areas, the evaluation found that the jobs created were mainly relatively low skilled ones, though as in Wales, this was in line with objectives of the programme, which was to bring the disadvantaged into the labour market.

Under Objective 3, the direct linkage between support and job creation is even less straightforward to establish. Although it is possible to identify the recipients of assistance and the form which support has taken, the net effect on employment remains uncertain, even though there have been gains to employability and business creation.

The Funds, for example, provided support for the creation of some 40,000 micro-enterprises in Germany over the period 2000–2005, with around 85% of these surviving beyond two years, well above the average rate of newly created firms. In Spain over 377,000 people received support as part of self employment and social economy activities. In Scotland, the Funds supported the creation of 1575 enterprises, with a survival rate of over 50%.

The Funds have also helped a great many people into employment, though the effectiveness of different programmes in this regard has varied considerably. In Austria almost 143,000 people received individualised support, over half of them finding jobs as a result. In addition, specific measures were financed to assist women into work, some 56,000 receiving support of whom 68% found jobs. Success rates were similar in Italy and Belgium, though in Spain it was lower with between 35% and 45% of women being in employment two years later. In Spain, in addition, almost 2.5 million people received support in the form of continuous training, a large proportion of these reporting that this had improved their employment prospects — in line with research findings that the return to individuals from training can be considerable[4]. On the other hand, measures targeting specific disadvantaged groups, such as the young with poor qualifications or people with disabilities, seem to have been less effective, with typically only 10–20% finding employment.

Intervention under Objective 3 also helped to improve job quality and the productivity of participants in support programmes, as well as contributing to a better balance of supply and demand in the labour market by increasing the employability of the unemployed.

Thematic focus in mainstream programmes

Improving territorial cohesion by improving transport infrastructure

A key area of European investment in the period 2000–2006 …

An efficient transport system is a key factor underlying regional competitiveness and growth. Accordingly, it is one of the main areas of investment of cohesion policy. While a large proportion went on motorways or other roads over the period 2000–2006 (47% of total spending on transport), a significant share went on rail (31%). Moreover, this amount increased over the period.

4 See for example Education at a glance — OECD indicators 2006.

In Spain and Portugal, in particular, there was considerable road construction over this period (Table 2.5). In the former, the programmes co-financed over 1200 km of roads and motorways — 60% of the increase in construction which occurred in Objective 1 regions, saving an estimated 1.2 million hours of travel time a year. In the previous period, some 450 kms of rail track for high speed train had been co-financed, between Madrid, Zaragoza and Lleida. The Spanish TGV network was extended in the period 2000–2006 with the connections Lleida-Tarragona-Barcelona, Cordoba-Málaga, Madrid-Valencia-Levante and Madrid-Valladolid (some 850 kms in total).

As a result of this investment, a strategic evaluation of transport, carried out in 2006[5] pointed to the relatively high density of the motorway network in Spain and Portugal, which had increased by 47.8% and almost 200% between 1995 and 2004 respectively. Except for these two countries together with Cyprus and Slovenia, however, all the Cohesion countries have motorway densities lower than the EU average. Investment in airports has also contributed to reducing accessibility constraints, in particular in the outermost regions.

… With an increasing focus on sustainable modes of transport …

Improvements in transport infrastructure, however, tend to stimulate additional demand, which can in turn exert greater pressure on the environment. This can be mitigated by measures such as appropriate choices between modes of transport and pricing policies.

In a number of programmes, there was an increasing emphasis on sustainability over the period 2000–2006. In Ireland, for example, the Funds financed Dublin's tramway system, in Athens, the metro, which has helped to reduce traffic congestion and pollution, 8 new stations being constructed and 17 new trains coming into service. In the Baleares, the Funds co-financed the railway connection between Palma-Inca and Manacor and in Bilbao, a second subway line.

2.5 Increase in density of motorways in Cohesion countries (km/surface area), 1995–2004

	1995	1999	2001	2004
Greece	3.2	3.4	5.6	9.0
Spain	13.8	17.6	19.0	20.4
Portugal	21.2	44.5	51.2	61.7
Ireland	1.0	1.5	1.8	2.7
EU-15	13.8	15.7	16.7	18.8

Source: Eurostat, except DG REGIO estimates for EL and PT

The shift in emphasis from financing road investment to financing rail over the period is confirmed by the strategic evaluation on transport and was particularly necessary given the slow growth of rail transport as compared with road. According to the Spanish Objective 1 mid-term evaluation, 12% of rail network in Objective 1 regions has been built with the support of the Funds.

In the new Member States, on the other hand, as noted in the previous chapter, the need is less to extend the rail network than to modernise lines in order to increase operating speeds.

The only EU country in which rail transport has increased faster than use of roads in recent years is France, reflecting the relatively high standard of the network and the growth of high speed trains and suggesting that substantial improvements in services can increase the share of journeys made by rail.

Cohesion policy brings not only financial support for investment projects but a more strategic and coherent view of transport and environmental infrastructure. For example, the *ex post* evaluation of the Fund[6] noted that in Ireland the Fund contributed to tackling deficiencies in the national road network, particularly on the main routes linking Dublin to the other major cities and towns in Ireland and with Belfast in the North.

5 Strategic Evaluation on Transport Investment Priorities under Structural and Cohesion Funds for the Programming Period 2007–2013 (October 2006). Study carried out for the European Commission by ECORYS http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/strategic_trans.pdf

6 *Ex-post* evaluation of a sample of projects co-financed by the Cohesion Fund (1993–2002) (DG REGIO — Ecorys 2005) http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/cohesion_project.pdf

In addition, it has brought a focus on Community priorities, such as more sustainable forms of transport. While in the early 1990s, there was little new government investment in rail infrastructure, in the period 2000–2006, some EUR 4 billion of national money, supported by the Cohesion Fund, was invested in the expansion of the railways (the Strategic Rail Review of 2003).

2.6 Forecast effects of 2007–2013 transport investment on the 12 new Member States

Objective: Economic competitiveness Indicator	Scenario 2031	
	No Structural or Cohesion Funds	With 2007–2013 transport investment
Average speed of inter-regional road trips (kph, increase as % of 2006)	3.7%	13.0%
Average speed of inter-regional rail trips (kph, increase as % of 2006)	0.4%	8.8%
GDP per capita (index, increase as % of 2006)	+0.0%	+3.0%

The effects concern average speeds over the whole network, not just the roads concerned. The results should be seen in this context and results on the roads concerned are significantly higher.
Source: European Commission, Strategic Evaluation on Transport Investment Priorities under Structural and Cohesion Funds for the Programming Period 2007-2013 (October 2006)

… And a potential high impact on growth and accessibility

The strategic study assessed the needs and priorities for transport investment under cohesion policy over the period 2007–2013 in the 15 Cohesion countries[7]. Although the effects differ from country to country, the potential cohesion programme investments are estimated to result in an increase in GDP per head of between 0.2% and 0.6% (some EUR 265 billion overall at 2006 prices) over the period up to 2031, the larger effects being estimated in Latvia, Lithuania and Romania[8] (Table 2.6).

So far as the return on investment is concerned, a total investment of some EUR 73 billion[9] yields estimated benefits of EUR 79 billion for the host countries and EUR 124 billion for the EU as a whole, underlining the substantial cross-border effects of transport projects and the case for European involvement in spending. Indeed, many of the projects would not be economic if considered purely in terms of the returns to the Member State commissioning them but have a high return for the EU as a whole.

The investments have also had the effect of increasing average road and rail speeds between regions, in many countries by 5–10% in the case of road, though less in countries where average speeds are already relatively high. The increase in rail speed is particularly marked in Portugal (35%). In general, by increasing the share of journeys made by rail, these investments contribute to sustainable transport.

Since the gains in terms of GDP growth and accessibility tend to be relatively evenly spread across regions, the contribution to reducing regional disparities is often modest. The effect, however, tends to be larger in smaller countries, especially if the investment serves to improve connections to the economic core of Europe.

In conclusion…

- There is a strong case for continued support of transport networks in the interest of the overall territorial cohesion of the Union, since many of the gains from investment accrue outside the country in which it occurs.

- While in many cases there is a need to increase the capacity of networks, there should be a greater emphasis on modernisation and the rationalisation of infrastructure. Investment which improves the use of infrastructure, such

7 To assess the impacts in terms of the core objectives of the Community Strategic Guidelines (competitiveness, cohesion and sustainability) several scenarios were generated using the SASI model, designed specifically for this purpose. The key scenario is the "balanced" one, which selects potential Structural Fund investments on the basis of their contribution to objectives and needs, but subject to realistic budget constraints. The model enables socio-economic developments in 1330 regions in Europe to be examined and so account to be taken of the implications of transport projects further afield, including outside the country in which they take place.

8 The model covers a 25 year time horizon — typical when assessing the effects of transport projects.

9 These figures represent net present values, based on a standard discount rate of 5% used for transport.

as Intelligent Transport Systems (ITS) or improved traffic management (including better information for travellers), have been identified as giving rise to potentially large gains, especially in congested urban areas, while contributing to sustainability in environmental terms.

- A particular priority is completing "missing links", including those between different modes of transport and across borders.

- There is a need to increase emphasis on more sustainable transport modes — on rail, improving ports ("motorways of the sea"), and cycle paths as well as urban public transport given the increasing car ownership and the spread of urbanisation.

- The cohesion benefits of transport links cannot be taken for granted, even when they are to sparsely populated and remote areas. The full range of social and economic effects should be assessed. Moreover, transport measures should normally be accompanied by investments in the socio-economic base of a region.

Improving environmental sustainability

Cohesion policy has made a major contribution to environmental quality, a fundamental precondition for sustained growth and the quality of life, the Funds playing a significant role in assisting Member States to comply with the environmental acquis in Objective 1 regions. For the 2000–2006 spending period, over 13% of the Funds went to environmental objectives, expenditure being concentrated in Objective 1 regions and Cohesion countries[10] (Table 2.7).

In addition, projects in other areas often have environmental benefits, perhaps the most important being support for enterprises investing in more environment-friendly technology or waste treatment.

2.7 Environmental expenditure under Cohesion policy, 2000–2006

Objective	Total objective	Environmental allocation	
	Million		%
Objective 1	116,430	8,595	7.4
Objective 2	22,527	815	3.6
Objective 3	17,467	–	
Community Initiatives	10,302	239	2.3
Total Structural Funds	166,726	9,649	5.8
Cohesion Fund	34,586	17,389	50.3
Total Cohesion Policy	201,312	27,038	13.4

Source: European Commission

In the EU-15 Member States, much of the infrastructure has been completed

Investment has tended to be concentrated on the infrastructure required to tackle problems such as inadequate water supply, waste water treatment and general waste disposal. As a result, the gap in the standard of environmental infrastructure between Objective 1 regions and others in the EU-15 countries has narrowed appreciably, the remaining deficiencies are generally confined to a few areas and regions.

The most progress has been made in respect of water supply. For example, in Spain, over the period 2000–2006, 2000 km of water pipelines were renovated and 600 km of new pipelines constructed, serving some 2.6 million people (around 6% of the Spanish population), and 57 water treatment plants and 13 desalination plants were built, serving 1.8 million people.

Improvements have also been made in treating waste. Structural Fund interventions in the Italian Objective 1 regions made differentiated waste collection accessible to around 6.4 million people and have helped to raise the share of this from 1.9% of total waste in 1999 to 8.2% in 2005.

The recent *ex post* evaluation[11] noted that over the period 1993–2002 public spending on the environment was 37% higher due to the Cohesion Funds. In Spain, it is estimated, for instance, that the Cohesion Fund has contributed 15% of the finance

10 Defined as investment in water supply, water treatment, waste treatment, renewable energies and protecting against air and noise pollution.

11 Ecorys (2005) *Ex-post* evaluation of a selection of 200 projects, co-financed by the Cohesion Fund over the period 1993–2002.

needed for sanitation and 69% of that for erosion and afforestation.

Renewable energy is a growing focus

The evaluations also indicate the significant growth of cohesion policy support for renewable energy over recent years. Cohesion programmes have supported a wide range of activities, especially in Portugal since 2004[12], though the specific focus (on wind, biomass, solar energy, etc.) has differed substantially between Member States. In Greece, there is significant potential for wind energy, the use of which has increased markedly in the past few years with support from the Funds. At the same time, the German evaluation report emphasises that the high technological content of renewable energy in itself contributes to regional innovation and development.

In the new programming period significant infrastructure investment is necessary in the new Member States

According to a recent study[13], which assessed the needs and priorities for environmental investment in the 15 Cohesion countries, total investment of some EUR 100 billion would be needed to improve water supply, wastewater treatment, municipal solid waste, renewable energy sources and natural risk management. The overall scale of investment typically averages between 1% and 2% of GDP a year. The need is particularly high in Bulgaria (4.5% of GDP) and Romania (4.7% of GDP) while at the other extreme, little investment is needed in Spain (0.1% of GDP).

For the new Member States, particularly Slovakia and Poland, the highest priority is investment in waste water treatment to meet the standards of the Urban Waste Water Treatment Directive. A range of other factors, however, affect decisions of what should and could be financed by cohesion policy, including limitations in administrative capacity as well as the potential for user charges and other funding sources such as obligatory purchasing schemes for renewable energies[14]. These factors could serve to reduce the contribution needed from the Funds over the medium-term by more than the half (an estimated EUR 47 billion).

… While more targeted and more "soft" spending seems appropriate in other Member States…

For the Member States which have been recipients of support from the Funds for many years, the conclusion from the updates to the mid-term evaluations is that support for environmental infrastructure projects should continue but only on a selective basis, with more judicious use of such methods as cost benefit analysis.

The further conclusion is that the demand for water and the production of waste water are likely to remain stable in most Member States. However, for waste, there seems to be a clear link with GDP per head. Some Member States, notably Spain, are likely to see waste production increase considerably, underlining the importance of accompanying hard investment with soft measures, such as demand management and awareness raising.

Infrastructure projects need to be based on an analysis of demand that takes account of future demographic changes. In some cases, such as in Eastern Germany, a decline in population is a major factor at regional level, in others, such as Portugal and Spain, urban-rural migration means growing pressure in urban centres and declining population in rural areas.

The substantial progress in improving infrastructure in the EU-15 Member States should be seen as an opportunity to shift attention to newer, "softer" environmental needs, including soil protection and integrated pollution control.

… And in particular investment in renewable energy

Renewable energies are a potentially major factor in combating climate change and containing EU de-

12 Supporting the Medida de Apoio ao Aproveitamento do Potencial Energético ("MAPE") national programme for renewable energy production, rational utilisation of energy and the conversion to natural gas, and, in particular, regional operational program for the Azores (PRODESA).

13 Strategic evaluation on environment and risk prevention, GHK Ltd, ECOLAS, IEEP (2006)

14 This is the legal obligation for energy producers to purchase electricity from renewable sources at attractive prices.

pendency on oil and gas. The objective has therefore been set in the EU of increasing the share of renewable energy in overall electricity production to 21% by 2010. The cost of development varies substantially across technologies but in most cases, renewable energies cannot yet compete in terms of cost with traditional energy sources.

The most important means of promoting renewable energy in Member States are obligatory purchase schemes, which make investment in their development profitable. In a number of Member States (Slovenia, Spain, Greece, Czech Republic, Malta and Bulgaria) the market funds between 67% and 98% of investment needed, though in others national measures for stimulating renewable energies need to be strengthened.

In conclusion

- For the new Member States, there is a strong need for investment in environmental infrastructure, particularly waste water treatment and waste management. For EU-15 countries, the balance needs to shift towards softer forms of spending, including the development of renewable energies, preventative approaches, soil protection, integrated pollution control and awareness-raising.

- Environmental strategies, including the implementation of the Water Framework Directive, need to be linked more closely to wider development strategies, and there should be an explicit recognition that environmental improvement can contribute significantly to wider economic development. This link needs to be better articulated in current programming documents.

- Emphasis ought to be placed on prevention and demand management. The scope for managing investment needs through effective preventative measures (such as waste minimisation) and demand management (especially of water) should be more clearly recognised in national and regional strategies. This is particularly the case in Spain, Greece and Portugal where, as noted above, increasing income has led to increased generation of waste.

- Programmes should be encouraged to provide clear data on the extent of current user charges, information which is necessary for assessing the scope for securing additional funding for the capital investment required.

- Programmes should also be encouraged to include measures to prevent and tackle natural and technological risks, including the development of appropriate management plans.

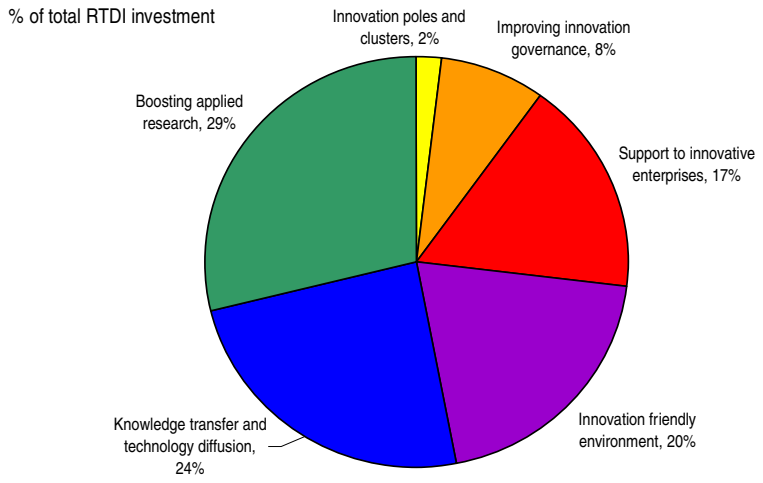
- Markets need to be created for a broader range of renewable energies and cohesion programmes need to support R&D and increase awareness of the potential of less commercialised technologies.

Knowledge and innovation for growth

Increasing evidence suggests that traditional comparative advantage based on the cost of factors of production is less and less relevant in a world where these factors can be sourced efficiently from a distance. This has led some to think that geography no longer matters. At the same time, theories of innovation and technological change attach increasing importance to geographical proximity, stressing the advantages from agglomeration, such as access to specialised inputs, knowledge and information as well as research centres specialising in particular areas of R&D. Such advantages are intrinsically local since processes of innovation are uncertain and cumulative; knowledge and capabilities are embedded in individuals and organisations.

In consequence, supporting investment which favours the consolidation of regional innovation systems, and in particular the economic, social and institutional environment in which firms and individuals operate, has a potentially important effect in strengthening the competitiveness of regions. This is all the more important, since national policies which support innovation tend to focus on the supply side rather than on demand and needs. The evidence, however,

2.3 Cohesion policy: types of RTDI measures financed, 2000-2006



RTDI: Research, Technological Development and Innovation
Source: European

suggests that cohesion policy interventions tend to be biased — particularly in the Objective 1 regions — toward R&D capacity and infrastructure.

Cohesion policy makes an important contribution to national R&D and innovation efforts, notably in Objective 1 regions

Support from the Structural Funds accounted for between 5% (Spain) and 18% (Lithuania) of expenditure on R&D in Objective 1 regions over the period 2000–2006, while co-financing, both by government and the private sector added significantly more. At regional level, the share of the Structural Funds allocated to R&D and innovation varied greatly from less than 5% in most of southern Europe and in the outermost regions to more than 15% in the Nordic regions. It is worth noting that those regions which rank relatively high on the innovative performance index described in Chapter I are also in general those that invest the most in R&D and innovation under cohesion policy.

It is equally worth noting that most regions have recognised the importance of such investment by increasing significantly the share of resources allocated to it in the present programming period (Maps 2.1 and 2.2).

As regards the focus of cohesion policy in this regard, support from the Funds in Objective 1 regions in EU-15 Member States tended to concentrate on measures to develop an innovation-friendly environment (including financing and human capital) as well as boosting the transfer of technology[15] (Fig.2.3).

There was only limited support for the creation and development of innovative enterprises in Objective 1 regions in the EU-15 (perhaps due to the prevalence of smaller family-run businesses). Support was greater in regions in the new Member States, which have the problem of the continuing restructuring of sectors previously dominated by large firms. There was also more focus on innovation poles and clusters in these regions, perhaps due to the later launching of programmes, which only began in 2004 (Fig. 2.4).

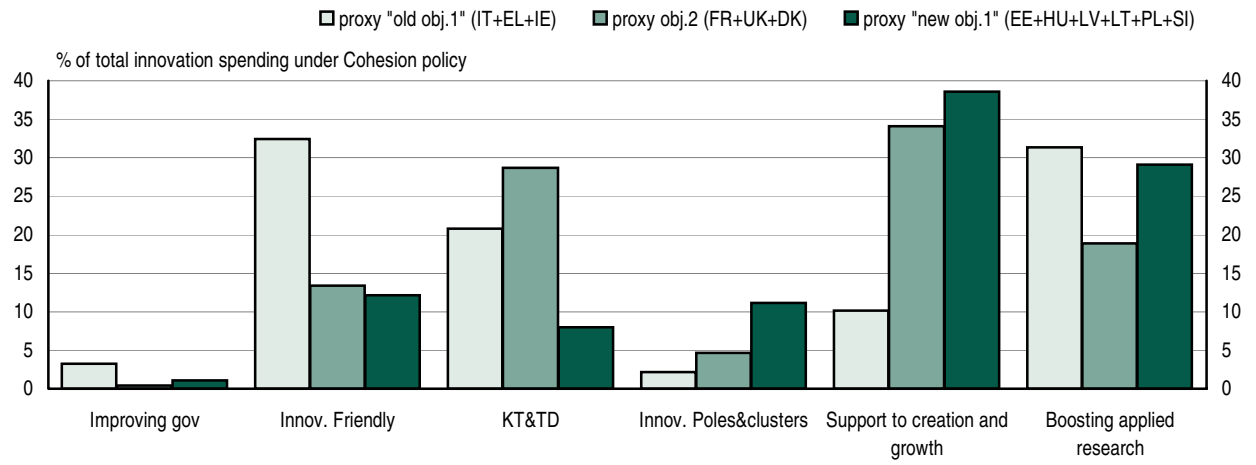
In Objective 2 areas, funds have gone predominantly in this direction, to support for innovative enterprises as well as for the diffusion of technology.

In many countries, support for RTDI has remained supply-oriented and directed at infrastructure, with limited amounts going to 'softer' demand-side measures aimed directly at enterprises. Large-scale programmes for constructing infrastructure have, therefore, been preferred to more complex 'innovative' measures aimed at improving links between businesses and research institutions. In this regard, the evaluation report emphasises the danger of RTDI measures being detached from the regional reality, of science and technology parks or incubators and research centres being built without the necessary services to bridge the gap between research and businesses, especially small firms.

The report also emphasised the importance of creating the capacity for innovation, and the demand for

15 "Strategic Evaluation on Innovation and the knowledge based economy in relation to the Structural and Cohesion Funds", Technopolis et al (2006)

2.4 Innovation spending by policy priority and broad regional category, 2000-2006



Source: European Commission

related services, in enterprises which are the target of these infrastructure programmes. The lack of such capacity may partly explain why technology transfer seems not yet to have produced the results which the amount of funding dedicated to it would suggest. The report cited Austria and the UK as examples of good practice in stimulating demand in companies for business and technology related services.

Similar results emerge from the mid-term evaluation update in Finland, which recommends that grants for product development be geared more towards joint public-private sector initiatives in order to involve the private sector more in initiatives and to develop networking further.

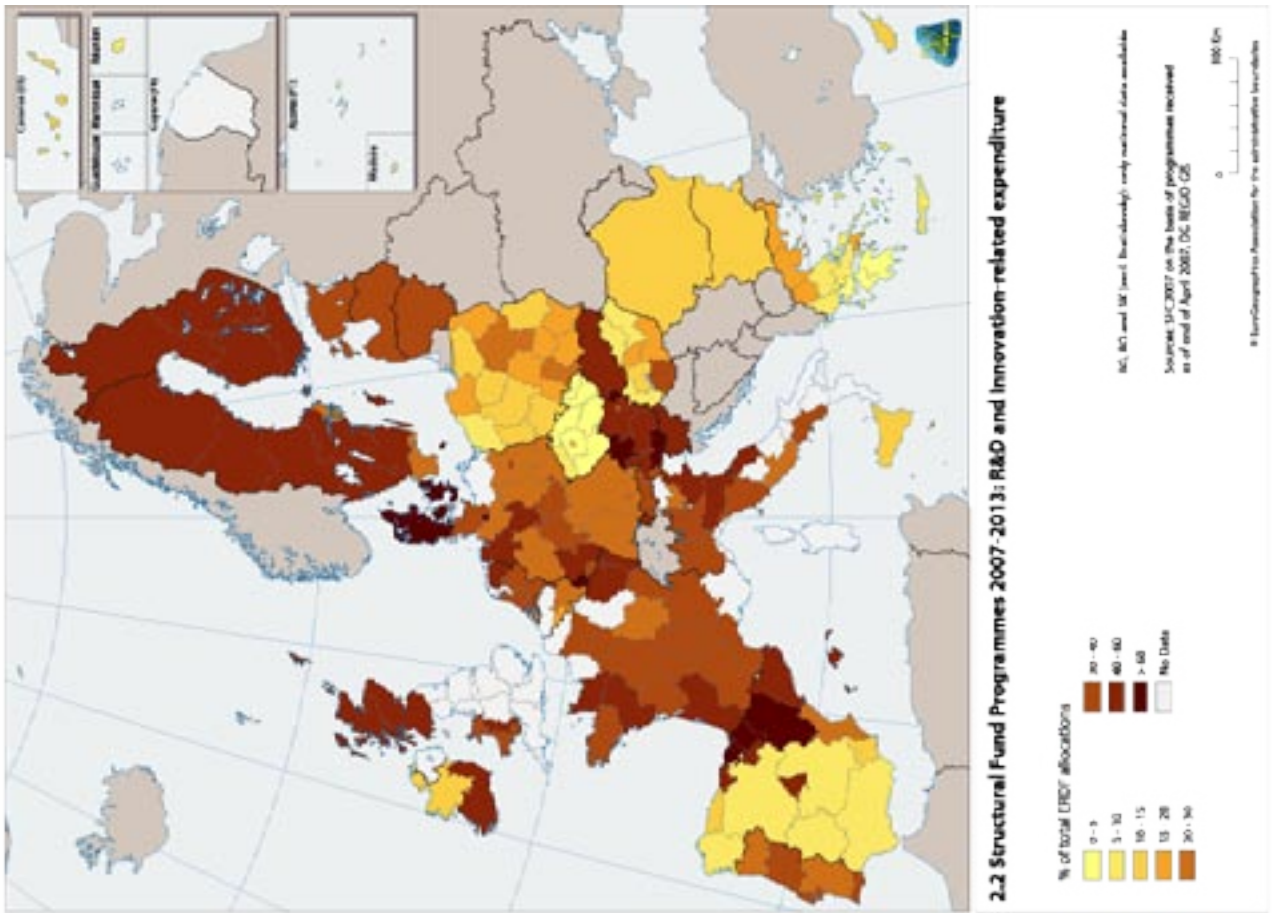
The updates to the mid-term evaluations indicated a number of cases where the Structural Funds contributed significantly to strengthening the innovative capacity of regions. For example, in Catalonia, the Objective 2 programme involved over 6,000 (some 21%) of the region's researchers and amounted to EUR 1.4 billion (37%) of private sector investment in the information society.

Innovation in the planned National Strategic Reference Frameworks (NSRFs)

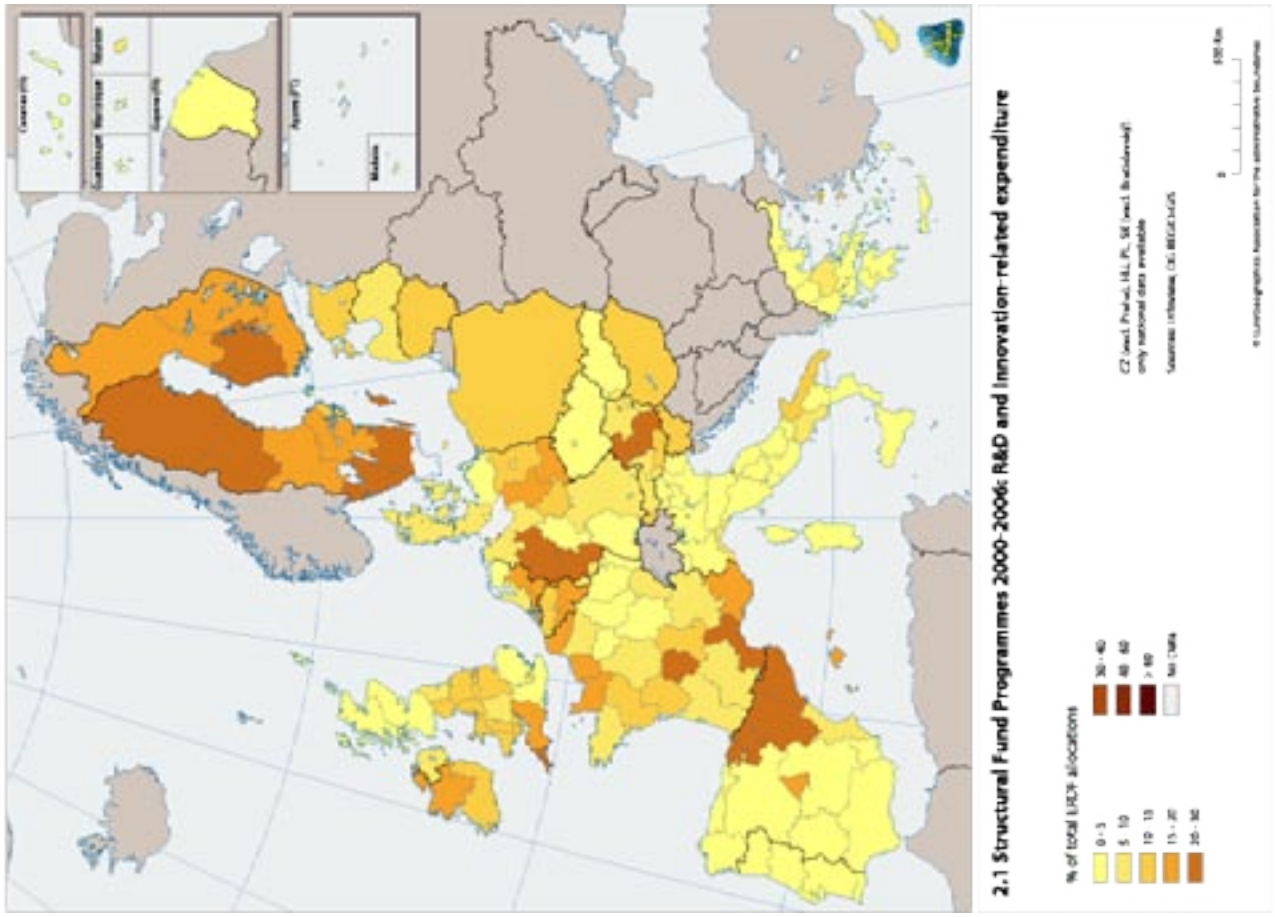
The medium-sized and larger Cohesion countries (Spain, Poland, Greece, the Czech Republic, Hungary, Portugal and Slovakia — i.e. those composed of more than one NUTS 2 region) are set to receive substantial transfers for innovation programmes under the National Strategic Reference Framework. In Poland, support for the national programme, "Innovative Economy" amounts to EUR 8.3 billion or more than 12% of the national allocation. In addition, innovation will be one of the key areas of intervention in each of the 16 Polish regional programmes and also in the Eastern Poland OP.

In the other medium-sized and larger Member States, promotion of innovation is one of the main priorities in the regional programmes. In France and the Netherlands, for example, innovation is the main priority in all the regional programmes and in each case is expected to account for around half of total expenditure. In Finland, the emphasis on innovation in all regional programmes reflects the explicit aim of using these as a means of decentralising the Lisbon strategy and increasing "ownership" on the ground.

In the smaller Member States, scale and administrative capacity considerations mean that programmes are more broadly defined and include innovation alongside other priorities such as infrastructure. This is typically the case for those receiving support under the Convergence Objective, such as the Baltic States, Malta and Slovenia, though it is also true of Denmark. This, however, does not imply any less emphasis on



2.2 Structural Fund Programmes 2007-2013: R&D and innovation-related expenditure



2.1 Structural Fund Programmes 2000-2006: R&D and innovation-related expenditure

innovation (Lithuania, for example, plans to allocate 8% of total resources to RTD infrastructure and a further 8% to the information society under the "Economic Growth" programme).

A strategic choice — hotspots versus lagging regions

The question of whether Member States choose to focus RTDI resources on 'poles' or 'hotspots' or on correcting regional differences in RTDI potential is a subject of debate. As noted above, many regions will remain predominantly 'users' of knowledge and need to construct their policy in the light of this. The competitiveness of such regions is dependent on the capacity of businesses to access knowledge, apply innovations developed elsewhere and convert these into market opportunities.

The Dutch and Finnish approaches are two different models for RTDI in future years. In 2000–2006, the Netherlands adopted a somewhat different strategy in Objective 2 regions to other Member States, with RTDI policy aimed at strengthening the 'hotspots' of research and innovation, or 'peaks in the delta'. Conversely, Finland used Structural Fund support to complement existing national policy measures directed at regions with relatively weak innovative capacity.

In conclusion

- The importance of innovation for economic growth and competitiveness and the disparities which exist between regions in this regard suggest that the proportion of the Structural Funds invested in this area needs to increase.
- It is important, however, that investment in RTDI infrastructure is complemented by the development of services and skills aimed at increasing the capacity of enterprises to absorb innovations and strengthening their links with research centres.
- RTDI strategy at regional level needs to take account of the specific characteristics of different regions in order to build on their actual or potential comparative advantages. In some lag-

Innovation and information society spending

Between 2000 and 2006, expenditure from the Structural Funds amounted to around EUR 4 billion in Spain on research, technological development and innovation (RTDI) together with the information society, covering:

- over 13,000 RTDI-based projects
- nearly 100,000 researchers participating in projects.
- support for over 1,000 technology and research centres
- the co-financing of most of the present 64 Spanish technology parks
- support for around 250,000 SMEs on their technology-based activities
- investment of nearly EUR 1 billion in ICT infrastructure, reducing the gap with the EU average significantly.

In the Italian southern region of Basilicata, the project called "One PC in every home", combined training and the provision of ICT services to households in order to enhance the quality of life. This project was implemented in the first part of the 2000–2006 period and resulted in a substantial increase in households with access to the Internet (36% of households in Basilicata had access to the Internet in 2006 as against under 4% in 1999 and 29% in Objective 1 regions as a whole) as well as an increase of the ICT services provided by municipalities (92% of municipalities in Basilicata provided such services in 2006 as against 20% in 2002 and 65% in the Objective 1 regions as a whole)

The ActNow project in Cornwall and the Isles of Scilly was aimed at increasing high-speed broadband use by businesses. By the end of 2004, more than 8,900 (50% penetration) businesses were connected and all 100 exchange areas in Cornwall and the Isles of Scilly had broadband access. In total, the region had a 37% rate of broadband penetration compared with the national average of 31%.

ging regions the effort should be concentrated on turning them into regional innovation poles; in some other the proper strategy would be to favour technology transfer rather then building basic research capacity.

- Integrating businesses in knowledge networks will increase the probability that they innovate and remain competitive[16]. Networks should bring together all the relevant public and private sector actors, including universities, and link them with the wider research community outside the region. Information and communication technologies are in this respect an important enabler of innovation processes.

SMEs and entrepreneurship — the motor of job creation

Small and medium-sized enterprises (SMEs) are a vital part of the economy. SMEs — especially new start-ups — however, often have difficulty in accessing capital, knowledge and experience. EU cohesion policy is aimed at tackling these difficulties through a combination of 'hard' measures, such as direct investment, and 'soft' ones, notably the provision of business support services, training and mentoring, and the creation of networks and clusters.

Cohesion programmes provided support to a large number of SMEs over the period 2000–2006. The Spanish Community Support Framework alone gave financial assistance, advice and coaching in managerial and organisational skills to 227,000 SMEs (some 28% of the total). In the seven Spanish Objective 2 Regions, a total of 95.000 SMEs have been supported through cohesion policy, particular to help them to expand and to develop on international markets. The evaluation of the Steiermark programme in Austria found that 75% of all business-related projects were implemented by SMEs, more than had been expected and an initiative had been launched to mobilise the potential of SMEs in R&D and innovation. In the UK, over 250,000 SMEs were supported in Objective 1 and 2 regions, around 16,000 of which received direct aid.

In many cases, the evaluators found that direct investment could have beneficially been more selective and better targeted. In order to minimise 'deadweight' effects (i.e. supporting activities which would have been undertaken anyway), they recommend the use of 'intelligent' instruments, such as 'soft support' (e.g. building competence and networks) and loans.

Where used, loans have demonstrated their potential, such as in the East of Scotland, where a range of financial instruments have been used, including the Scottish Co-Investment Fund (see Box).

There is evidence that 'soft' investments are at least as effective as direct aid, though they need to be carefully designed and targeted. For example, in Denmark, evaluators found that projects that gave priority to building links between research centres and businesses created more jobs per project relative to expenditure than others, as well as more lasting and sustainable jobs. In Finland, evaluators found that it was important that projects fitted in with regional programmes, while it was important that there was cooperation between all the participants, a clear commercial orientation and clear financing streams, 'light' bureaucracy (to encourage creativity), emphasis on people rather than organisations, a

Innovative finance for new companies — the Scottish Co-investment Fund

The Scottish Co-investment Fund (SCF) is a £90 million equity investment fund set up by Scottish Enterprise and part financed from the Structural Funds, in order to assist smaller growth companies. Unlike a conventional venture capital fund, the SCF does not find and negotiate investment deals on its own.

Instead, it has established partnerships with venture capital fund managers and business 'angels', who find the investment opportunity, negotiate the investment deal and invest their own money. If the venture needs more money than the private sector partner can provide, they can call on the SCF to co-invest on equal terms. The SCF then becomes part of the investment syndicate. This novel financing model enables private sector investors to bring more money to deals, and to spend less time finding this money.

16 Technopolis, op. cit.

target group of users, and a common commitment to, and understanding of, the project.

A number of programmes involved entrepreneurial training, aimed at making people more enterprising by improving their attitudes and skills. In some cases, this had a dramatic effect on the survival rate of business start-ups. In Asturias in Spain, for example, (a 'phasing-out' region), the evaluators found that 98% of new companies supported remained in business after a year, while in Sardegna, the survival rate after a year was around 92%.

On the other hand, efforts to promote business start-ups among disadvantaged groups have had mixed results. While in the East of Scotland Objective 2 region, there was evidence of some success, in Ireland, evaluators reported that expenditure on the entrepreneurship part of the programme had reached only 36% of its revised 2000–2006 target by the end of 2004.

In conclusion

- Wide-ranging measures to support investment tend to be indiscriminate and risk having significant deadweight effects. Direct support measures should be carefully targeted and subject to rigorous testing of their likely effectiveness, such as through cost-benefit analysis.

- "Soft" measures such as the provision of services, training and mentoring, and the support to networks and clusters can be effective if part of an overall strategy based on a clear analysis of needs and understanding of the demand.

- Measures to support entrepreneurship have proved effective in a number of regions. There is a need to strengthen measures for promoting business start-ups among disadvantaged groups, notably ethnic minorities and some women, who still face barriers in this regard.

Investing in people

During the programming period 2000–06, cohesion policy (through the European Social Fund) allocated approximately EUR 69 billion, or nearly one third of the budget of the Structural Funds, to developing human resources and enhancing employability. The contribution of the cohesion policy to public spending on labour market policies, however, varies considerably across Member States (from only around 2% in Denmark to 15% or more in Italy). For the period 2000–06, the ESF regulation identified five areas of intervention:

- Improving the access of women to the labour market (6%)

- Adaptability (22%)

East Midlands internationalisation strategy

In the East Midlands in the UK, like all regions across Europe, the challenges of globalisation are increasingly felt. Manufacturing constitutes a larger than average proportion of the economy, which means that the potential effects of global competition on businesses are correspondingly greater. Businesses, however, have viewed this as an opportunity to actively engage with emerging economies, especially China and India.

Flagship companies such as Rolls Royce are already leading the way in terms of joint ventures and investment in China, and work closely with regional authorities and agencies to ensure a wider strategic approach. The East Midlands Development Agency has worked with stakeholders, including local government, to fund a China Business Bureau and will shortly extend an India Trade Bureau to cover the whole region. These agencies help local SMEs to access new markets and internationalise their business. In addition, the East Midlands' representation in Brussels is complementing this approach, by developing a new pan-European Enterprise Platform involving major blue-chip companies such as Motorola, Hewlett Packard and Microsoft, in order to explore how public-private collaboration can enhance regional competitiveness.

Under the new ERDF operational programme, EU policy will be more in line with the objectives of the region's economic strategy. A sum of EUR 268.5m from the ERDF will go to the region which will be matched by public funds of an equal amount.

- Lifelong learning (23%)
- Equal opportunities and social inclusion (18%)
- Active labour market policies (30%)

Although spending patterns differ between Member States and some interventions can be classified differently in different programmes, the broad patterns of expenditure reflect the growing importance of adapting skills to new labour market needs, including sustained guidance for the unemployed, and adapting education and training systems to help achieve this.

Cohesion policy investment in people contributes importantly to convergence

The main contribution of cohesion policy as regards employment and social policy lies primarily in targeting support on individuals. The investment concerned has a number of positive effects in relation to economic and social cohesion[17]:

- Increased productivity: according to estimates, an extra year at intermediate level education or equivalent training increases aggregate productivity by about 5% immediately and by a further 5% in the long term[18].
- Reduced rates of unemployment: by increasing the skills of low skilled workers, who tend to have significantly higher rates of unemployment, the overall rate can be brought down.
- Increased participation in the labour force of women and people at a disadvantage, such as those with disabilities. Increased numbers of women in work have been a key factor in raising the growth in GDP per head in the Cohesion countries in the EU-15.
- Increasing participation in tertiary education and continuing training: the return to university education is substantial, with estimates suggesting that someone who has completed tertiary education earns, on average, around 50% more than someone who completed only secondary education[19]. There seem to be an equally strong relationship between wages and on-the-job training, with some estimates indicating that a year of training increases wages by as much as 5%.

Support for active labour market policies in respect of both individuals and the systems for managing programmes absorbed a significant share of funding over the period 2000–2006. Support for the modernisation and development of employment services was focussed on increasing their capacity to assist people and to implement new methods and programmes, including their ability to forecast future employment trends and skill needs, in order to reduce mismatches between the skills of the work force and those required by employers.

As part of this intervention, support was provided to those out of work, both the unemployed and inactive, and to young people looking for their first job, the aim being to increase their employability and improve their access to employment through tailor-made measures, including training, career advice and guidance, and help with job search.

A recent study which examined over 100 evaluations of active labour market policy concluded that training programmes are most effective when combined with private sector incentive measures or with other forms of support (such as mentoring) and sanctions (with 40–50% higher success rates). Moreover, evaluation studies show the positive effect of participation to be ongoing. A follow-up survey of those completing programmes indicates that their rate of employment had increased significantly in the longer-term. For example, in Italy, those who had successfully completed a training course had 26–31% more chance of being in employment 12 months later. In England, a survey of participants indicated that their average rate of employment was some 14% higher 6 months after completing the programme in question than 12 months before.

17 See for example John Fitz Gerald, "Lessons from 20 years of cohesion", The Economic and Social Research Institute, 2004

18 De la Fuente and Ciccone, 2002

19 Based on statistics contained in OECD, Education at a Glance, 2006

Continuous changes in economic and labour market conditions, however, linked to globalisation, the development of a knowledge based economy and demographic trends are leading to new challenges. In particular, there is growing need for measures to encourage active ageing and longer working lives, to increase participation in the labour market and to facilitate geographical and occupational mobility to make labour markets more flexible.

Convergence is also furthered by investing in the development of services to support people

In general and in Objective 1 regions in particular, the Funds have contributed to the modernisation and reform of employment services, in the form of the development of counselling, job brokering and personalised services, especially for those who had been out of work for some time.

In Spain, for example, intervention resulted in the development of new labour market measures and systems of training as well as individual advice and guidance for unemployed. In Germany, it has supported local authorities to build the capacity to undertake the new tasks introduced by the labour market reforms.

Particular attention should continue to be given to women…

Cohesion policy has played an important role in promoting gender equality for many years both by including it as a cross-cutting objective in all programmes ("mainstreaming") and through specific interventions. The information from national evaluations indicates that specific actions have stimulated debate on gender equality as well as helping to bring about institutional changes aimed at reducing inequality in the labour market.

A number of the national evaluations point to the impact of EU actions on national policies. In a number of Member States, such as Germany, Ireland and Italy, the establishment of special arrangements or institutions on gender equality are regarded as a clear outcome of ESF actions. The Swedish evaluators considered that the Objective 3 programme has had a positive impact on national policies in terms of increased participation, motivation and mobilisation in activities linked to the national gender mainstreaming strategy.

Despite the positive developments, the employment rate of women remains much lower than that of men, especially those with relatively low education levels. There are, in addition, still wide gender pay gaps and major differences in career progression. To reduce these, further support is needed to increase the care services available for children and others in need of care and to reduce gender-based segregation in the labour market and in education.

…and groups at the margin of the labour market

Support has been given to those disadvantaged in the labour market in order to help them find employment. The measures concerned are often the same as those included under active labour market policies but they tend to be combined into "integration pathway" packages adapted to the specific needs of the people in question (such as social skills, language training if they are migrants or assistance in setting up new businesses). The aim is to provide support to individuals all the way from identifying their need for training or other forms of assistance right through to placing them in a job and ensuring that they are properly integrated into the workplace.

In addition, the social partners, individual employers and local communities have been involved both in actively assisting the social integration of disadvantaged groups and in providing appropriate support services.

Those in the work force need continuously to update their skills and competencies….

There is an almost continuous need in today's economy for workers to adapt to changing job requirements and to be prepared to change their career path several times during their working lives. Cohesion policy has supported measures to anticipate and stimulate economic change and to help the workers affected find new jobs through updating and extending their

skills and qualifications as well as to set up in business for themselves.

…and education must have the capacity to train tomorrow's workers.

Cohesion policy has also helped to foster links between education and businesses. Support triggered the reform in a number of Member States of education and training systems (such as by adjusting curricula to labour market needs or improving the training of teachers), assisted the development of new forms of training and provided support for lifelong learning. It also increased the access of individuals to education and training and supported counselling and career guidance activities.

In Portugal, for example, cohesion policy co-financed training and education for adults in a wide range of vocational areas. There were over 10,000 participants, the great majority of them unemployed, and many long-term unemployed, typically aged between 25 to 44 with only compulsory schooling at most and three quarters of them women. According to a survey of those completing the programme, most of them obtained a formal recognition of acquired competencies and a significant number found jobs despite the unfavourable labour market situation, a quarter of whom considered that it would have been difficult or impossible to obtain the job without the training. In addition, some 29% of them had re-entered the education system to continue their studies and another 12% stated their intention of doing so within the next two years, so giving them the chance to obtain qualifications which would improve their position on the labour market.

Cohesion policy has also helped to develop public employment services and social services as well as education and training. There is a need, however, to strengthen the Funds' support further by improving the capacity of national authorities to design and implement policies, especially in lagging parts of the EU.

Cohesion policy has, in addition, supported the development of partnerships and pacts between the various actors concerned, helping them to work together to solve common problems. Such initiatives need to be encouraged further to mobilise all interested parties in the reform process at national, regional and local level.

… effective education and training systems are crucial….

An important role of cohesion policy is to support the adaptation of training and education systems to the new requirements of the labour market and to the needs of the knowledge-based society. For example, in Ireland cohesion policy has provided support for the establishment of a single, coherent award system for all levels of education and training, which is easily understandable by learners, teachers, employers and community workers alike. In Belgium, a partnership between university and training institutions was established to develop new educational methods to promote lifelong learning and, in particular to widen access to education and training through distance learning.

Estimates suggest that the returns to education even among those in middle age are significant. According to an OCED study, therefore, the net rate of return (i.e. after taking account of the costs and foregone earnings) to someone aged 40 obtaining a university degree ranges from 8% in Sweden to 28% in Belgium[20].

In conclusion

- Projections of demographic trends indicate that with a declining number of people of working age increases in productivity will become the main source of economic growth in future years. Investing more in education and training is therefore crucial to ensuring the sustainability of the European social model.
- The continuing shift towards a more knowledge-based economy underlines the need to invest

20 OECD, Education at a Glance, 2006. Available data on Belgium, Denmark, Finland, Hungary, Sweden and the United Kingdom.

in improving the adaptability of workers and entrepreneurs alike. These challenges concern all Member States. Cohesion policy has focussed on directly supporting workers as individuals. In the future, it should provide more support to encourage companies to increase their investment in human resources and to recognise the skills of their work force as a determining factor of their competitiveness. In addition, special attention should be given to the effects of restructuring, with a particular focus on the problems faced by low-skilled and older workers.

- There is an equal need for better management of migration together with more emphasis on the integration of cross-border labour markets and on increasing the geographical mobility of workers as well as the integration of migrants. This should include not only the strengthening traditional measures but also the promotion of acceptance of diversity in the workplace and the combating of discrimination in the labour market.

- The employment rate of women remains well below that of men and women are still today paid less on average in the same job. Policy intervention should focus on the root causes of gender employment and pay gaps.

- The efficiency of social inclusion measures could be strengthened if there were more focus on preventive action and early recognition of needs. This includes, in particular, discouraging young people from leaving school prematurely and giving them the opportunity to acquire the qualifications required to ensure they can find a decent job and avoid the risk of social exclusion.

Strengthening institutional capacity to provide public services and to develop and deliver policies

Effective institutions at national, regional and local level are an important aspect of the competitiveness of Member States and regions and of the attractiveness as places in which to invest and live.

Cohesion policy contributes to enhancing institutional capacity. In Portugal, for example, the reform of public services led to a reduction in the number of days needed to start a business from 60 to12 and, in a second phase, to 24 hours. Support was also given to the establishment of “citizens’ shops”, bringing together all the main public services available to people. These now cover 26 different kinds of service.

The need to invest in institutional and administrative capacity building has become even more evident since the recent EU enlargements. Even beforehand, the pre-accession instruments provided considerable support to the countries concerned in this area. After the 2004 enlargement, the Commission insisted on the need not only for further investment but for an extension in the scope of support. Examples of measures targeting public administration and services can be found in the Czech, Estonian, Hungarian, Latvian, Lithuanian and Polish programmes, with a focus mainly on increasing professional skills in authorities at national, regional and local level, including support for developing high quality training systems.

In conclusion

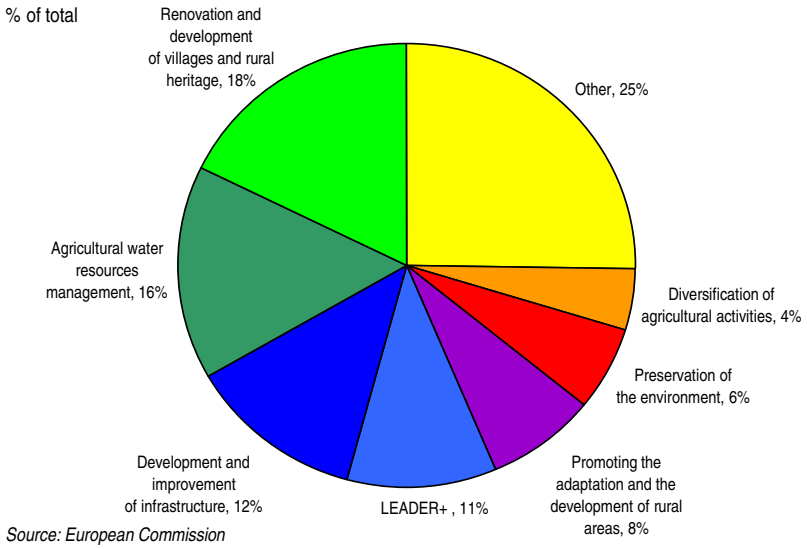
- Strengthening institutional and administrative capacity is a key element in promoting structural adjustment, growth and jobs. Cohesion policy should, therefore, devote sufficient resources to strengthening the efficiency of public authorities and public services in convergence regions in order to improve their ability to design and deliver their policies.

Rural measures

Over the 2000–2006 programming period, almost EUR 14 billion of the Structural Funds (including the EAGGF-Guidance), around 7% of the total, went towards rural development. Co-financing by Member States added just under EUR 9 billion to this. The EAGGF-Guidance accounted for 86% of expenditure.

There were five main areas of spending: making the most of the rural heritage, the management of water reserves, and the development of infrastructure, the

2.5 Total rural development expenditure by category, 2000-2006



Source: European Commission

adaptation of rural economies and protection of the environment (Fig. 2.5). The EAGGF-Guidance and the ERDF differed in their areas of support:

- the EAGGF-Guidance was spread across all five areas, with a few predominant, such as the development of water reserves, the LEADER+ programmes and support for developing the rural heritage;
- the ERDF was more concentrated on a few areas, like support for the rural heritage, tourism, handicrafts, protection of the environment and the general restructuring of the rural economies (Fig. 2.6).

While the EAGGF-Guidance was of major importance for the main recipient countries, the ERDF had a predominant role for other countries, notably the Netherlands, Slovakia, Sweden, Portugal and the UK (over a third of funds coming from this).

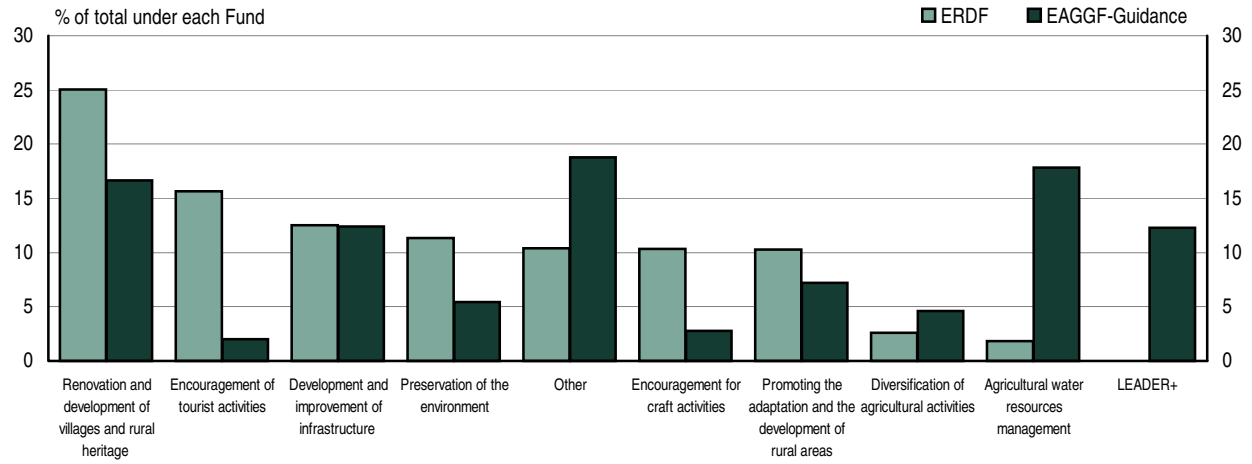
The effect of expenditure appears to have been especially significant in:

- improving accessibility, the emphasis being put on communication links between towns and surrounding rural areas, though also on rural transport services (such as rural taxi buses) and on links with the major transport networks;
- in developing networks for treating waste and waste water, such as in Ur in the eastern Pyrénées in France, where 18 remote rural communes have joined forces to put in place common systems for sorting, recycling, compacting, transferring and incinerating waste;
- in developing ICT, through a number of projects expanding infrastructure (coverage of broadband, use of satellites) and services (access of SMEs and the general public to ICT, tele-services to SMEs, teleworking, tele-information, tele-healthcare and so on). In Guadalinfo in Andalousie, 25 pilot centres were opened to provide public access to the Internet and assistance to SMEs. The Tras os Montes Digital project in Portugal enabled a regional portal to be opened for both public and private bodies providing services to businesses and individuals;
- in encouraging the diversification of economic activity in regions and developing regional assets, such as in Burgenland in Austria where a plant for bottling water has been funded providing employment for 35 workers;
- in developing rural tourism, such as through the Eco-tourism project in Alviela in Alentejo in Portugal which has led to the establishment of a centre combining green tourism, raising public awareness and scientific research, or the Alqueva dam aimed at the same time at improving irrigation, generating electricity and developing tourism. Projects of this kind are designed to make the most of the rural heritage by diversifying the local economy and creating employment.

The mid-term evaluations[21] in a number of Member States found that tourism projects were effective in

21 See for example Agra CEAS consulting (2005) "Synthesis of the rural development mid-term evaluation"

2.6 Rural development expenditure by category under the ERDF and the EAGGF-Guidance, 2000-2006



Source: European Commission

expanding regional income. In Finland, for example, the share of revenue from tourism in the total turnover of firms supported was 19% in the east and 3% in the north; and in Corsica the investment in agro-tourism supported increased income by between 15% and 30%.

Success in maintaining employment, and to a lesser extent in creating jobs, was reported in many cases, especially in Finland, Spain, Ireland and Greece, though this tended to be in farming rather than in other activities.

Positive effects on the environment were also reported in a number of regions, though these tended to be relatively modest. In southern regions, measures were focused primarily on fundamental problems such as the management of water reserves and environmental awareness, whereas in the north, they tended to take the form of rural advice, conservation and support of local community projects.

While some positive effects on living conditions were equally reported, particularly in Portugal, these were generally on a small scale.

From experimentation to mainstreaming: Community initiatives and innovative actions

Over the period 2000–2006, the Funds supported Community initiatives in a number of different areas. These enabled experimentation to take place, representing a kind of laboratory where policy innovation could be tried and tested. All of the initiatives provided an opportunity to develop policy in respect of territorial cohesion, encompassing area-based solutions, networking within and across national boundaries and new forms of partnership.

INTERREG: a success story

INTERREG, the largest of the Community Initiatives, supports co-operation between regions in order to promote greater economic and social cohesion in the European Union and has evolved in terms of design, management and delivery over the past 15 years. Strand A programmes for cross-border integration are the most numerous and have been in existence for longest. Strand B programmes for trans-national cooperation were developed in the late-1990s from INTERREG IIC programmes and Article 10 pilot actions. Strand C programmes for the exchange of experience to improve policy design and delivery were introduced in 2000.

2.8 INTERREG III, 2000-2006 - Distribution of expenditure by domain

Domain	%
Transport infrastructure	20
Environment	17
Economic development	13
ICT and R&D	7
Tourism	6
Culture	6
Labour market, training and skills	5
Community development, local cooperation	5
Spatial planning	5
Urban planning	4
Technical assistance	4
Rural development	3
Energy	2
Health and social issues	1
Other	2
Total	**100**

Source: European Commission

Since the 2000–2006 round, these three strands have been complemented by the INTERACT programme for identification and dissemination of best practice in programme management know-how.

INTERREG III had an overall budget for the 2000–2006 period of almost EUR 5.8 billion (at 2004 prices), two-thirds of which went to 6 countries, Spain, Germany, Greece, Italy, France and Portugal. The new Member States which entered in 2004 accounted for 8% of the total.

Despite the limited scale of support on average (EUR 74 million per programme), the programmes tended to have a significant leverage effect (EUR 165 for every EUR 100 invested, EUR 5 of which came from private funds). This covered investment which would most certainly not have materialized without INTERREG. European regions have identified gaps and undertaken joint actions to promote effective and sustainable transport systems, access to the information society, protection of the environment and natural resources and co-operation between urban and rural areas. The effects of borders have been reduced and both people and business in border areas have benefited from common development strategies. Networking has helped regions to find common solutions to problems via large scale sharing of experience and good practice.

Expenditure in the period 2000–2006 was in the main concentrated on four activities: transport (a significant part on financing links between different modes of transport), support of networks, tourism and aid to SMEs (Table 2.8).

INTERREG helps to strengthen cross-border links …

Although the relatively late adoption of many INTERREG programmes meant that it was difficult to gain an overall picture of its effect at the time of the mid-term evaluations, a review of these[22] found early indications of the effectiveness of programmes.

Systemic links have been constructed, for example, between public authorities and other institutions as part of the Austria-Slovenia programme, resulting in a significant increase in the number of contacts at national, regional and local level between the two countries.

New institutions have been established in a number of border regions (such as Euroregio in Steiermark and the Working Group in Kärnten), while existing agencies have been strengthened and their funding increased (Regional development agencies in Slovenia and Regional Management Offices in Austria) and new cross-border networks have been created (Association Steiermark–N-E Slovenia). In addition, new cross-border partnerships have been formed (such as Euregio Maas Rhein IIIA) and the decentralised programming approach has brought a wider range of participants into the process, helping to ensure that projects are genuinely bottom up (such as Danish-German IIIA).

… Learning and exchange of experience

The mid-term evaluations also pointed to a sustained exchange of experience, knowledge and know-how across borders and countries, broadening the perspectives of the participants concerned. They noted, in addition, the development of cooperative project management skills among public sector officials.

22 "A Study of the Mid Term Evaluations of INTERREG programmes for the Programming Period 2000–2006" EPRC published by the Interact secretariat (2005)

REGINS — Regions join together to improve regional cluster management

Cluster management makes a real difference in helping small businesses survive and preserve jobs and growth. It means dynamic SMEs can work with research and marketing support in a way that allows them to compete with bigger enterprises with more established supplies of capital and services. This is why four regions in Austria, Germany, Hungary and Italy decided to join forces to share knowledge on cluster management in automobile and biotechnology sectors.

The aim of the REGINS project was to stimulate the exchange of know-how on cluster management, and regional innovation and SME support policies, so supporting innovation through cooperation. REGINS researched and evaluated what makes a cluster work well. An interregional assessment of the regional cluster management initiatives was carried out, resulting in a Good Practice Recommendations guide. Training and mentoring schemes were set up to convert successful cluster management into practical results. The project also supported joint research and economic development activities in smaller sub-projects in the two sectors concerned.

An increase in mutual understanding and knowledge, for example, was referred to in Alpine Space IIIB, Germany-Luxembourg-Germanophone Belgium IIIA, France-Wallonie-Flandre IIIA, while exchange of good practice in administrative and financial management in Alpine Space IIIB.

The mid-term evaluations also found most of the programmes would not have happened without INTERREG funding or would have been smaller in scale or less timely.

For example, in the Sweden-Norway IIIA programme, it is estimated that 71% of projects would not have happened without INTERREG, while in the Nord IIIA programme between Norway, Finland, Sweden and Russia, 60–80% of those responsible for projects considered this was also true in their case. Equally, in the Flanders/Netherlands IIIA area, projects would generally have been smaller without the programme.

… But also a unique management challenge

INTERREG programmes, however, are challenging because of their international nature, including those relating to their geographical spread, the diverse political, legal and administrative contexts they need to accommodate and their need to remain accessible to partners. In particular, the number (7 on average in IIIB programmes) and composition of participating countries has important implications for programme performance. For example, in the case of the outermost regions, their particular geographic situation, including the characteristics of the neighbouring countries, has imposed particular constraints in the management of the trans-national INTERREG programmes. Yet, according to the mid-term evaluations, programmes had overcome the large majority of these difficulties.

URBAN: an important experiment in local partnership

The URBAN Community Initiative was set up to assist urban neighbourhoods in crisis. The second round, URBAN II, covered 70 cities and 2.2 million inhabitants. Those included face a number of severe social and economic challenges, such as high unemployment, crime rates around twice the EU average and limited amounts of green space. Support was concentrated in particular on planning and regeneration, which accounted for around a third of spending over the period 2000–2006, while a further 10% went to measures to further social inclusion (Table 2.9).

Targeting action on small areas of severe deprivation enabled an integrated approach to the various problems to be followed. Programmes were highly concentrated in financial as well as territorial terms, support per inhabitant being 30% higher than in Objective 2 regions on average.

URBAN programmes put a strong emphasis on local partnership. In around a third of cases local authorities formally managed the project in a further third, they did so de facto. In over 80% of cases, local community groups participated in the formulation of actions under the programme. Building local partner-

2.9 URBAN II, 2000–2006 — Distribution of expenditure by domain

Domain	%
Productive environment	**15.2**
Assisting large business organisations	0.1
Assisting SMEs adn the craft sector	12.9
Tourism	1.9
RTDI	0.3
Human resources	**19.2**
Labour market policy	2.2
Social inclusion	10.2
Developping educational and vocational training	4.0
Workforce flexibility, entrepreneurial activity	1.5
Positive labour market actions for woman	1.4
Basic Infrastructure	**51.1**
Transport	6.8
ICT	3.3
Energy	0.2
Environmental	1.6
Planning and regeneration	33.0
Social and public health	6.5
Miscellaneous	**7.4**
Technical assistance	**7.0**
Total	**100.0**

Source: European Commission

ships creates ownership and develops management capacity at local level. But it also takes time and effort[23].

In line with the emphasis on partnership, many of the mid-term evaluation updates reported on the strong performance of programmes as regards 'softer' outcomes, especially the building of local partnerships or engaging the local community. The strong local partnership and presence of several agencies in the decision-making process was considered, for example, to have ensured the smooth operation and sustainability of URBAN projects in Spain and to have demonstrated that a local authority led project is a successful model for locally based regeneration.

The evaluation updates for the UK provide further illustration of the potential of the local partnership model, with performance on soft outcomes and the engagement of the local community both being above expectations. Job and enterprise measures, however, while generally on target by end-June 2005 had started slowly initially.

Following the results over the period 2000–2006, most of the National Strategic Reference Frameworks (NSRFs) for the period 2007–2013 contain references to sustainable urban development measures in line with the URBAN model. In most cases, these are to be carried out through specific priorities within particular operational programmes. In some cases, however (such as Denmark and Germany), urban development is to be a 'cross-cutting' objective, with the effect on cities included as a necessary consideration within each priority. In many cases, the sums involved are a considerable proportion of the total — Ile de France is allocating half its budget (EUR 63 million of EUR 127 million) to urban neighbourhoods in crisis.

In line with the URBAN emphasis on partnership, most of the NSRFs envisage close co-operation between relevant parties in the urban areas concerned, including local authorities, though only a minority specify delegating the management of projects to local authorities. An exception is the Netherlands where the "Regio West" operational programme delegates management responsibility to the four big cities (Utrecht, Amsterdam, Rotterdam, Den Haag).

EQUAL: working against discrimination and inequality in Europe

EQUAL is a Community Initiative which serves as a test-bed for exploring inclusive ways of delivering labour market policies and developing good practice (Fig. 2.7). It makes an important contribution to ongoing labour market reform, supporting both the translation of the European Employment Strategy into National Reform Plans and the implementation of equality legislation in Member States. Jointly financed by the European Social Fund and national governments, EQUAL is structured around four key principles:

23 "*Ex-post* evaluation of the urban community initiative"(GHK consulting, 2003) http://ec.europa.eu/regional_policy/sources/docgener/evaluation/urban/urban_expost_evaluation_9499_en.pdf

- partnership: tackling complex problems by involving all relevant stakeholders
- trans-national co-operation: learning from experiences in other Member States
- innovation: developing and testing new approaches
- mainstreaming: sharing good practice and influencing policies and practices.

The EU contribution to EQUAL is around EUR 3.27 billion and is supplemented by national co-funding of over EUR 2.2 billion. There are 27 EQUAL programmes, at least one in each of the EU-25 Member States (there are two each in Belgium and the UK) and round 3,000 projects. One of the clearest aspects of added value of EQUAL lies in the promotion of new means of cooperation — the programme requires participants to operate in partnership with others — which has led to integrated and coordinated approaches as well as cooperation across countries. Exchange of information, experience and staff has contributed to the adoption of innovative approaches and to improvements in the quality of projects, while the local organisation of trans-national events has helped increased the credibility of projects at local level.

EQUAL has been effective in a number of cases in improving existing practices and extending them to new groups. In a few Member States, it has been used to explore possible action in areas where policy was not developed or practical experience was limited, such as in combating racism and xenophobia, supporting the social economy, helping to improve the work-life balance and the integration of asylum seekers.

Networks have been set up in all Member States and have been the main means of organising exchanges between projects. These have generally worked well and have sometimes been transformed into “communities of practices”.

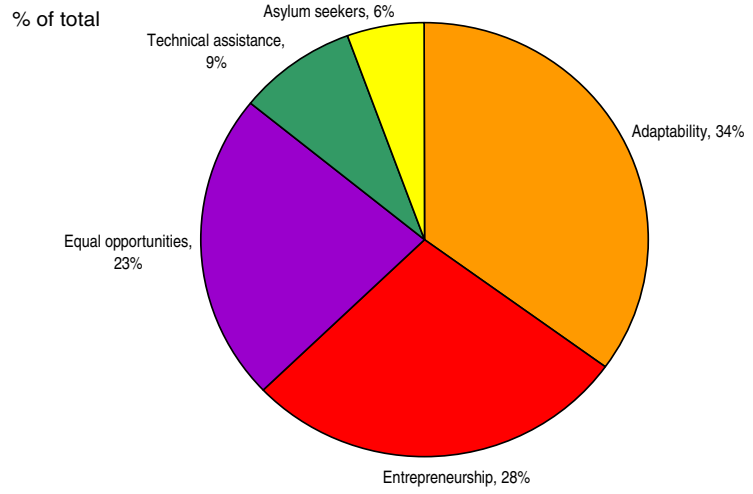
For the period 2007–2013 the main objectives of EQUAL are in line with the horizontal objectives set out in the new ESF regulation. In particular, with a view to stimulate trans-national co-operation, notably through information and good practice exchange, an increase by 10% of the co-financing rate can be decided by Member States.

Innovative actions: a laboratory for innovation

The Regional Programmes for Innovative Actions implemented in the EU-15 during the 2000–2006 programming period are the successors of many pilot actions supported by the ERDF in earlier programming periods. The programmes continued to support regions to build up innovation strategies and implement action plans in relation to technological innovation and the Information Society, so stimulating the development of strategic and planning competencies at regional level.

These 2–3 year programmes were aimed at improving the quality of assistance under the Structural Funds. Being experimental, the finance allocated was limited, the maximum amount for each programme being EUR 3 million.

2.7 EQUAL: Distribution of financial resources (current prices) by domain, 2001-2006



Source: European Commission

Their purpose is to fund pilot actions developed as part of an innovation strategy in order to find new solutions for regional development needs that could be generally applied in the mainstream programmes, if successful.

The regions were asked to concentrate on three main priorities: technological innovation, information society and sustainable development, reflecting the major Lisbon priorities. The bulk of the funding went to programmes relating to technological innovation and information society (51% and 34% respectively), in the former, the focus being on technology transfer, innovation in SMEs and clustering, in the latter, on developing services and applications for people as well as SMEs in the form of new business process (e-Commerce, networking).

A total of 183 programmes from 151 regions of the EU-15 were approved, 28 regions having applied for two successive rounds. The results indicate that 2 or 3 years is often not long enough for regions to develop and implement a strategy. In consequence, only a few regions shifted the activities developed in their Innovative Actions Programme into mainstream operational programmes during the 2000–2006 period. With the active support of the Commission, however, many are drawing on their experience to develop new approaches and actions, including experimental ones, in their operational programmes for the period 2007–2013.

Complementarity between Cohesion Policy and EIB assistance

The mission of the European Investment Bank, the EU institution for providing long-term finance, is to help fund capital investment in support of common policies. To this end, it raises substantial funds on the capital markets, which are then directed on favourable terms to projects and programmes which are in line with EU objectives.

The EIB selects investment projects to fund on three criteria:

- consistency with EU priorities;
- quality and soundness of projects, which involves assessing their technical and environmental viability as well as their social and economic benefits;
- financial benefits which are specific to the EIB loan in question as compared with alternative sources of borrowing.

In line with its Statutes and obligations under the EC Treaty (art 267), the EIB has always given priority to lending for “projects for developing less-developed regions”. Regional development is a key objective that has been re-enforced since enlargement, “economic and social cohesion in the enlarged EU” being a core aspect of EIB business. However, the EIB remit is wider than this and, in addition to giving support to trans-European Networks and environmental protection, it also includes pursuit of the Lisbon targets, particularly in respect of education and training, R&D and innovation, including support for innovative SMEs. In this regard, the EIB has developed, with the Commission, new financial risk taking initiatives.

During the 2000–2006 programming period, an average of 71% of total EU lending went to regional development, a sum amounting to nearly EUR 184 billion, 74% of this taking the form of direct loans (see Fig. 2.8 for the distribution of lending per head by Member State). Of these, half went to Objective 1 regions (Table 2.10).

EIB loans are an important complement to the Funds not only in their own right but because they provide a bridge between assistance from the Funds and loans from commercial banks, as well as giving access to financial expertise. Such loans, moreover, can be used for national co-financing of projects supported by the Funds. Because of the EIB’s reputation in financial markets, these loans can act as a catalyst, attracting finance from other sources.

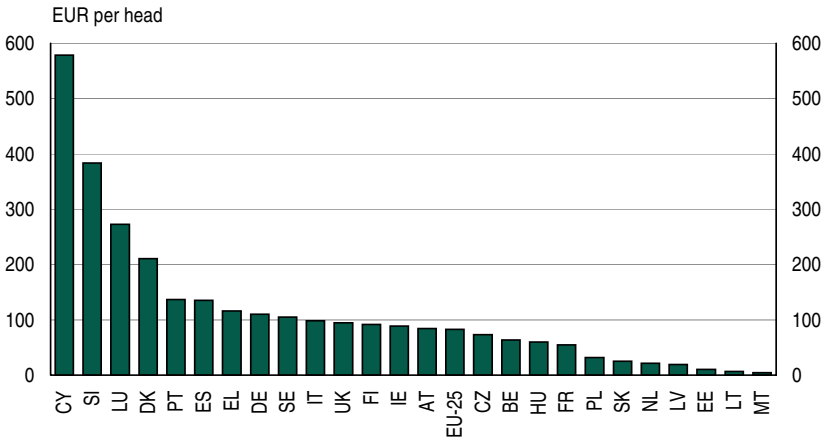
EIB loans have also provided support to Objective 2 regions, complementing assistance from the cohesion policy by focussing on efficiency-enhancing and revenue-generating investment with the Funds concentrating more on basic infrastructure projects, especially in the less prosperous regions. The EIB, in addition, pro-

vides expertise to assist in the appraisal of major projects. Between 2000 and 2006, over 200 projects were appraised by the EIB at Commission request.

Delivery of cohesion policy, its method and governance

A sound institutional framework and effective administration in Member States and regions are preconditions for the success of cohesion policy. The financial support provided under the policy also has broader spill-over effects important for economic growth more generally.

2.8 EIB loans to Member States, average 2000-2006



Source: European Investment bank

Management is improving …

The updates to the mid-term evaluations concluded that the new Member States have successfully put in place a suitable framework for managing cohesion programmes. Moreover, there was already evidence of improvements in the way programmes were managed. In Estonia and the Czech Republic, for example, evaluators noted how much had been learned in terms of collecting and monitoring data and defining indicators, baselines and targets.

For the EU-15, the evaluators also noted improvements in the management of programmes in the period 2000–2006. Italy is a prominent example with better project appraisal, auditing and monitoring, while in Austria, there have been experiments with an original approach to evaluation, involving the continuous exchange of detailed information on inputs and outputs considered critical by stakeholders. This "process evaluation" enables early action to be taken as events unfold, as well as giving a better understanding of less tangible developments such as in respect of innovation.

In addition, improvements seem in a number of cases to have had positive effects in other areas of government policy — for example, in Ireland, the evaluators noted an improvement in strategic planning, monitoring and project evaluation in relation to national programmes.

On the other hand, it was noted that administrative capacity was often lacking in relation to transport, where projects tend to be large and long-term with a need for a high degree of co-ordination. Evaluations pointed in many cases to a lack of a shared strategy between participants and problems of project selection as well as of management, especially delays, which usually stem from prolonged negotiations on contracts, planning difficulties, the scale of projects and difficulties in securing adequate finance.

2.10 EIB direct loans in the EU-25, 2000–2006 (EUR million)

	Objective 1 (incl. phasing-out)	Objective 2 (incl. phasing-out)	Mutli-regional (other)	Total
2000	8,525	5,247	1,585	15,357
2001	10,127	4,116	2,270	16,513
2002	8,963	4,485	1,685	15,133
2003	10,346	7,128	2,185	19,660
2004	10,114	7,742	3,692	21,548
2005	12,435	11,634	4,020	28,088
2006	11,515	6,272	2,434	20,220
Total	72,025	46,624	17,871	136,520

Source: European Investment Bank

Governance is also crucial for mobilising expenditure on R&D. Mid-term evaluation updates in both Italy and Spain noted the importance of coordinating the activities of the main players and ensuring their commitment. The evaluation of the Västra Objective 2 programme in Sweden found that while the setting of clear priorities for cohesion programmes improved programme implementation perceptibly, the authorities responsible also need to demonstrate strong and sustained support for the effects to be maximised.

… And public-private partnership (PPP) are developing…

Public-private partnerships (PPP) are seen as an important potential source of finance for investment in many areas. For example, European Commission estimates[24] suggest that more than 60% of the Trans-European Networks will be financed by Member States directly or via other sources, including private sector ones.

An *ex-post* evaluation by the EIB[25] of their experience with PPPs indicates that projects are generally completed on-time, on-budget and to specification, which is important since delays and budget problems are often a feature of regular publicly-financed projects under cohesion policy[26].

PPP projects, however, involve some difficulties. Governments need to have sufficient knowledge and capacity to deal with the complexity involved, while a lack of a legal framework or economic incentives is sometimes cited as a reason why PPP has until recently been limited to a few large projects.

… But partnership, coordination and long-term commitment could improve …

Updates to the mid-term evaluations concluded that more and better partnerships are needed to strengthen the participation and institutional capacity of local and regional authorities, the social partners and NGOs. In Hungary, for example, evaluators noted that stakeholders needed to be involved both in the setting and implementation of objectives. Clear and regular communication is essential for this. Following the evaluation for the Czech Republic, the authorities are working to make public-private partnership easier.

The need for better and longer lasting partnership is particularly important in the case of longer-term projects. As regards innovation, for example, a number of the reports indicated the need for a stronger, longer-term institutional commitment as well as better coordination of the various authorities involved as well as the main private sector organisations. Businesses should, therefore, be involved in designing regional development strategies.

… more investment in human resources is necessary …

More investment is needed in human capital, particularly in the new Member States. The evaluators noted that Cyprus and Malta, because of their small size, face a particular challenge in this regard, though the issue is a more general one. Training is needed to reduce staff turnover and achieve the standards required to manage substantially increased amounts of funding in the 2007–2013 period. This applies to all aspects of programme management as well as to those preparing projects for funding and those involved in monitoring programmes.

Expertise is particularly needed in the management and administration of transport projects. The mid-term evaluations emphasised the importance of such aspects as: establishing a long-term coherent plan, coordinating the activities of the various levels of government and relevant public agencies and the creation of agencies with sufficient expertise, staffing and other resources and continuity.

… and procedures can be streamlined and simplified

The strategic evaluation of innovation noted the need to reduce red-tape and formalities and to introduce

24 See EC (2005) Trans-European Transport Network, TEN-T priority axes and projects 2005

25 See EIB (2005) Evaluation of PPP projects financed by the EIB.

26 See for example ECORYS (2005) *Ex-post* evaluation Cohesion Fund

more flexible and risk-tolerant practices. The updates to the mid-term evaluations noted that simplification is needed in respect of public procurement, the development of public-private partnerships, clarification of the roles of the different bodies implementing cohesion programmes, monitoring and evaluation, and data collection and transmission. In Poland, for example, action has already been taken on evaluation recommendations to make application and procurement procedures simpler and more transparent.

Partnership is particularly important at local level

In general the evaluators concluded that development at the local level is a key focus of the ESF. There is a high degree of collaboration and partnership working at the local level. Local authorities, the voluntary sector and more generally the not-for-profit sector are often major partners in the delivery of ESF services. Indeed the support for partnerships and mobilisation of public, private and local actors is regularly mentioned as a source of added value.

The reform and new challenges for 2007–2013

The agreement on the financial perspectives in May 2006 and the entry into force of the new regulatory framework in August prepared the way for the next generation of programmes to be supported under cohesion policy over the period 2007–2013.

The first formal step was taken with the adoption by the Council in October 2006 of the "Community Strategic Guidelines on cohesion" (CSGs) which confirm the role the new programmes will play in delivering investment for growth and jobs. The second step consisted of the submission, based on the CSGs, of national strategies ("National Strategic Reference Frameworks" or NSRFs) by the Member States in which certain elements were subject to Commission decision. In a third step, the Member States submitted the individual programmes for Commission decision, detailing how national strategies would be implemented through regional or sectoral programmes or a combination of both.

In anticipation of the final decisions on the regulations, the authorities in the Member States and the Commission worked together throughout 2006 on draft national strategies and, in some cases also on draft operational programmes. This was necessary to save time so as to ensure that most of the 444 new programmes could be decided by mid-2007.

Whereas the delivery system for cohesion policy has demonstrated its capacity to implement quality programmes and projects of European interest on the ground, a number of problems have been detected in the management of the programmes in the period 2000–2006.

The reform adopted by the Council while maintaining the key principles of cohesion policy — programming, partnership, co-financing and evaluation — introduces a number of changes to enhance the efficiency of the policy. These are designed, first, to encourage a more strategic approach to programming, secondly, to introduce further decentralisation of responsibilities to partnerships on the ground in the Member States, regions and local areas, thirdly, to reinforce the performance and quality of programmes co-financed through a reinforced, more transparent partnership and clear and more rigorous monitoring mechanisms, and fourthly, to simplify the management system by introducing more transparency, differentiation and proportionality while ensuring sound financial management.

This section outlines the main elements of the reform, set in the above context.

The strategic approach — linking cohesion policy to the Lisbon process

The conclusions of the European Spring Council in 2005 stated that:

"*it is essential to relaunch the Lisbon Strategy without delay and re-focus priorities on growth and employment. Europe must renew the basis of its competitiveness, increase its growth potential and its productivity and strengthen social cohesion, placing the*

main emphasis on knowledge, innovation and the optimisation of human capital.

To achieve these objectives, the Union must mobilise to a greater degree all appropriate national and Community resources — including the cohesion policy — in the Strategy's three dimensions (economic, social and environmental) so as better to tap into their synergies in a general context of sustainable development. Alongside the governments, all the other players concerned — parliaments, regional and local bodies, social partners and civil society — should be stakeholders in the Strategy and take an active part in attaining its objectives."

In addition a simplified governance arrangement was introduced, aiming to facilitate the identification of priorities while maintaining the overall balance of the strategy and the synergy between its various components; to improve the implementation of those priorities on the ground by increasing the Member States' involvement; and to streamline the monitoring procedure so as to give a clearer picture of national implementation of the strategy.

Cohesion policy makes an important contribution to realising the aims of the Lisbon strategy. In effect, growth and cohesion are mutually supportive. By reducing economic and social disparities, the Union helps to ensure that all regions and social groups can contribute to, and benefit from, the overall economic development of the EU. Articles 3 and 158 of the Treaty reflect this vision.

For this reason, cohesion policy in all its dimensions must be seen as an integral part of the Lisbon strategy. In other words, cohesion policy needs to incorporate the Lisbon and Gothenburg objectives and to become a key vehicle for their realisation via the national and regional development programmes. Strengthening the linkage between cohesion policy and the Lisbon strategy has been the heart of the cohesion policy reform agreed upon in 2006.

A strategic approach has been agreed upon to bring greater efficiency, transparency and political accountability. In order to achieve this, cohesion policy should concentrate better on the use of the Funds towards making progress on the global priorities of the European Union.

The investment funded by cohesion policy will further the Lisbon strategy for growth and employment, in line with the conclusions of the Spring Council in 2005. The negotiations leading up to agreement on the programmes confirmed the commitment of Member States and regional authorities to the renewed Lisbon agenda, which seems to have fundamentally affected priorities and mindsets. The NSRFs and the programmes so far agreed demonstrate this in a number of ways.

First, in relation to administrative organisation, it is evident that there has been a high degree of cooperation between those responsible for coordinating the implementation of the National Reform Programmes (NRP) and those responsible for the preparation of the NSRFs. Nearly all the NSRFs indicate how this cooperation is organised, which is both new and important, since only in a few countries, such as in the Netherlands, are the same Ministries responsible for both. In some countries, the authorities seem to have decided that effective coordination required administrative change: in Hungary, for example, where the new National Development Agency oversees both the NSRF and the NRP processes, or in Poland, where part of the remit of the newly created NSRF coordinating committee is to establish links with the NRP.

Secondly, in relation to transparency, the NSRFs clarify which parts of the NRPs the new programmes will be aimed at achieving. In the case of Estonia, for example, financial tables have been provided to show the contribution the programmes will make to the Estonian NRP financing plan. Similarly, in the case of the Czech Republic, the 24 priorities of the NRP (out of a total of 46) that will be implemented via the new programmes are listed. As well as improving transparency, such details help to see the contribution of the programmes to the Lisbon strategy.

Thirdly, as regards substance, Member States increased the emphasis on innovation, RTD and the

knowledge economy. Innovation is a prominent feature of the programmes which will be undertaken in the present period, often combined with efforts to encourage entrepreneurship and business growth.

Concentration and simplification

While a large part of the funds made available under cohesion policy is typically spent by public authorities on infrastructure projects, an important and growing share goes to business development and in this regard the rules imposed at Community level tend to have a knock-on effect on government relations with companies where support of enterprises is involved.

Important steps have already been taken to simplify cohesion policy by streamlining legislation and simplifying rules for managing the Structural Funds and the Cohesion Fund. In particular, by implementing:

- One set of management rules: there is now a single Commission implementing regulation for the 2007–2013 programming period, which replaces 10 existing regulations for the 2000–2006 programming period. The rules for management of programmes financed by the Cohesion Fund have been aligned with those of the Structural Funds. The effect should be to make management of the Funds easier and less costly for Member States.

- One set of eligibility rules for expenditure: Member States will be able to use national eligibility rules for co-financed projects rather than having two sets of rules (one for Community co-financed projects and one for nationally-funded projects) as in the past, so simplifying project management for Member States.

- Electronic government in practice: for the first time, document exchange between the Member States and the Commission will take place only electronically in the 2007–2013 programming period, marking the beginning of a new era in e-Governance. The system concerned, SFC2007, will be used for both the Structural Funds and the Cohesion Fund, as well as the European Agricultural Fund for Rural Development and the European Fisheries Fund. With this system in place, 40% of the EU budget will be electronically managed, saving time in running programmes, as well as paper, and reducing instances of disagreement between the Commission and Member States on the amount and type of information to be provided.

- Simplification of financial management: the financial plans, the setting of the intervention rate and EU reimbursements will now be made at a higher level — at programme or priority axis level, instead of at measure level as before. This will simplify management of the programmes by Member States and the Commission and limit the cases where financial plans need to be modified, so giving a wider autonomy to the national authorities in charge of the management of operational programmes.

- Simplification of management systems: the new systems have been built on the existing systems so as to avoid the need for Member States to change substantially what is already in place. Clarifications and improvements have been introduced, however, where experience has shown that there is a need, for example, as regards the work to be carried out for first level management verifications and for the method of sampling of operations to be audited.

- Increased proportionality and simplification of control systems: for smaller programmes (total eligible public expenditure under EUR 750 million and Community co-financing under 40% of total public expenditure), certain requirements on control arrangements can be carried out by national bodies established according to national rules, so reducing the need to adapt national arrangements to comply with particular Community requirements.

- Simplification of the procedure for closing programmes: the new possibility of “partial closure”, whereby closure can take place in respect of completed operations in certain cases, will alleviate the burden of the process on Member States (and the Commission) at the end of the programming

period. Earlier closure in respect of these operations will also reduce the costs of retaining documents for audit purposes, as the time period for conservation of documents will start at the time of the partial closure for the operations concerned, rather than the (probably much later) date when closure of the whole programme takes place.

- Clearer rules on information and communication: people generally and potential recipients of the Funds in particular will in all Member States automatically have the same access to information on funding opportunities and awards from the Community budget for cohesion policy, so reducing the time and effort they have to spend in finding such information.

Earmarking

The integrated guidelines for jobs and growth[27] argue that certain categories of investment are particularly conducive to growth "such as research and development (R&D), physical infrastructure, environmentally friendly technologies, human capital and knowledge". This general recommendation is valid for the Union as a whole and, arguably, more so for those countries and regions for which rapid convergence towards the Community average and increased competitiveness are vital.

The decision of the European Council to endorse the Commission's proposal to "earmark" resources under cohesion policy to support certain Lisbon-related priorities calls on Member States to ensure efficient allocation of cohesion resources to make a full contribution towards growth and employment. In particular, it invites Member States and regions which are in the process of preparing cohesion programmes for the period 2007–2013 to pay particular attention to those priorities and make an additional effort toward them.

The list of domains falling under earmarking does not pretend to replace either the broader set of priorities identified and regularly updated under the Lisbon agenda, or to prevent Member States from using Cohesion funding in support of other national priorities. Rather, it draws the attention of Member States and regions to a subset of areas where a particular effort is necessary and which are particularly relevant in the context of cohesion policy. These can be regrouped under five, broad headings:

- promotion of research and development, innovation, and an inclusive information society
- a strengthening of industrial competitiveness and the promotion entrepreneurship
- encouragement of the sustainable use of resources and the strengthening of synergies between environmental protection and growth
- expansion, improvement and linking up transport infrastructure of European importance
- investment in people.

Notwithstanding the decision of the European Council to exempt "*the Member States that acceded to the Union in or after 2004*" from needing to apply the earmarking, most of the Member States have *de facto* engaged in the exercise as analysis of the National Strategic Reference Frameworks and Operational programmes demonstrates.

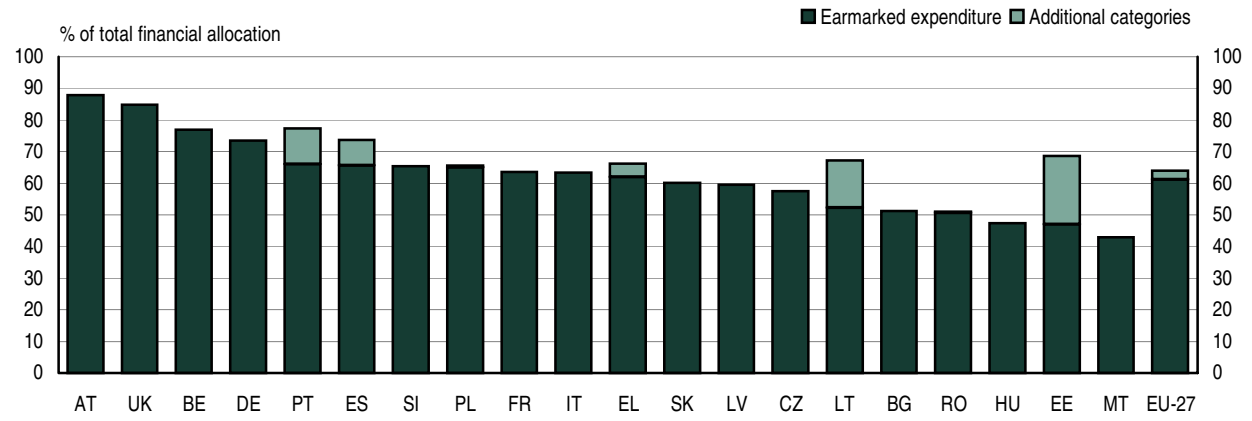
On the basis of the intentions of Member States and regions as reflected in the programming documents available at the time this report is being prepared (corresponding to around 90% of the amounts agreed under the financial perspectives), the earmarking targets of 60% for the Convergence objective and of 75% for the Regional competitiveness and employment objective have been reached.

For the EU as a whole, 64% of the Funds under the Convergence objective and 80.8% under the Regional competitiveness and employment objective will be allocated to earmarked investments[28] (Fig. 2.9

27 Communication of the Commission to the Spring European Council, "Working together for growth and jobs — Integrated guidelines for growth and jobs (2005–2008)", http://ec.europa.eu/growthandjobs/pdf/integrated_guidelines_en.pdf

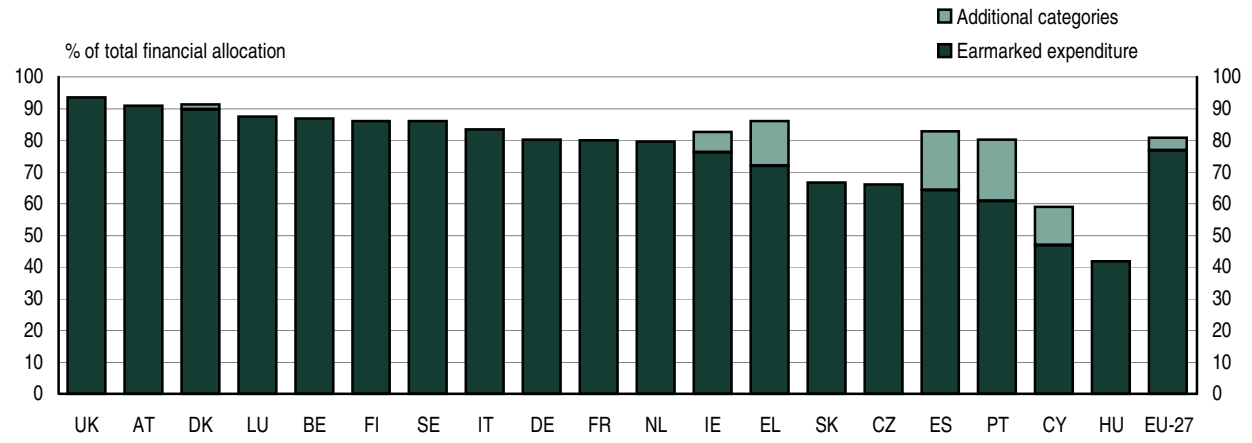
28 This figure includes the categories of investment which certain Member States have added to the earmarking to "ensure that specific national circumstances, including the priorities identified in the national reform programme […] are taken into account" (Article 9.3 of Council regulation 1083/2006).

2.9 Earmarking: expenditure on Convergence objective, 2007-2013



Source: European Commission, data available at the end of April 2007

2.10 Earmarking: expenditure on Regional competitiveness and employment, 2007-2013



Source: European Commission, data available at the end of April 2007

and Fig. 2.10). These percentages mean support of these investments amounting to around EUR 210 billion, an increase of over EUR 55 billion compared with the programming period 2000–2006. In the EU-15 — for which the earmarking of cohesion spending is obligatory — the corresponding figures are 72.1% and 83.0%.

The position of each Member State and its contribution to the overall targets vary greatly, reflecting — among other things — diverse investment needs and the different situation in the period 2000–2006. The figures per Member State need to be interpreted with some caution, however, since in certain cases relatively few programmes have been so far officially submitted.

In terms of the policy mix, it is worth noting that earmarking has helped focus the attention of Member States on R&D and innovation, one of the key dimensions of the Lisbon strategy. Investment in this area shows in general the biggest increase in relation to 2000–2006, its share of the total more than doubling under the Convergence objective and more than tripling under the Regional competitive and employment objective. This represents overall investment in R&D and innovation over the period 2007–2013 of around EUR 50 billion.

Chapter 3 — National Policies and Cohesion

Table of Content

Introduction

Public investment, which adds to the communal capital stock, is a key element of policy across the EU in both contributing directly to economic growth and strengthening the productive potential of the economy so enabling higher rates of growth to be sustained in the future. As such, it is both a central focus of cohesion policy, which seeks to help put in place the infrastructure and other conditions needed to underpin regional development over the long-term, and of the Lisbon strategy, which aims at creating a more dynamic European economy.

It should be emphasised that public investment in its most meaningful sense covers investment in human as well as physical capital and that improving the skills of the work force through expenditure on education and training is as important as enhancing infrastructure in creating the conditions for regional development[1].

The focus here, however, is confined to public investment in a relatively narrow sense to cover public expenditure on gross fixed capital formation. The concern is to examine the way that this has developed in different parts of the EU over recent years and the part which the Structural Funds and the Cohesion Fund have played in this. It, therefore, leaves out of account other forms of investment, particularly on human resources, which has equally been supported to a significant extent by the Structural Funds. This is not because this other investment is any less important than expenditure on physical capital — indeed, it is an essential element in creating the conditions for sustained economic growth — but simply because the relevant data are much less readily available on a comparable basis across the EU.

Investment in the growth and jobs strategy: the role of national policies

A new partnership

After several years of slow progress towards the objectives set by the Lisbon summit in 2000, the European Council in Spring 2005 agreed on a fundamental re-launch of the strategy for the pursuit of growth and jobs. The renewed Lisbon agenda identified three vital strands in the re-launch: strengthening knowledge and innovation, as the engines of sustainable growth, ensuring that the EU is an attractive area in which to invest and work and recognising that growth and employment are the best means of making for social cohesion. Governments have a crucial role in this as structural reforms are paramount if the objectives are to be achieved.

An important element in the renewed strategy concerns the way that it is governed. The respective responsibilities at national and Community level are defined more clearly to match actions better with competencies. Mobilisation of stakeholders and consulting and establishing partnership with them at local, regional and national level are considered essential to increase the sense of 'ownership' of the strategy on the ground and to make the reforms more effective.

The National Reform Programmes

To assist Member States in identifying their needs and priorities in terms of growth and job-generating policies, the Commission adopted the first Integrated Guidelines for Growth and Jobs for the period 2005–2008. These guidelines relate to macroeconomic, microeconomic and employment issues, and provide the basis for the National Reform Programmes which contain details of the reforms which Member States intend to implement to deliver growth and jobs.

In their 2005 National Reform Programmes, the Member States address issues closely in line with the Integrated Guidelines for Growth and Jobs. The National Reform Programmes indicate a shift in policy towards research and innovation, resource and energy efficiency, freeing up of SMEs, entrepreneurship and education, investment in human capital and modernisation of labour markets together with securing high levels of social protection for the future.

All National Reform Programmes identify key challenges in the three strands of the Integrated Guide-

1 This, of course, is not to say that the endowment of physical and human capital is the only important factor for regional development. Other factors include good governance, innovative capacity, social facilities and so on.

lines. As regards macro-economic policy, many Member States are pursuing budgetary consolidation and announced reforms to pensions and health systems. In relation to the areas covered by the microeconomic guidelines, nearly all the Member States pinpointed research and innovation as well as entrepreneurship and the business environment as major challenges. While innovation is the key priority for most Member States, investment in infrastructure was also mentioned in their national programmes and nine considered it a priority.

As regards employment, attracting and retaining more people in work is the priority in the European Employment Strategy in most cases. Member States plan to intensify efforts to reach out to groups and individuals at the margins of the labour market, in a balanced approach combining personalised labour market support, high quality social services and adequate levels of minimum income. Of the three European Employment Strategy priorities, improving the adaptability of workers and enterprises was a policy priority for the least number of Member States, despite the fact that increasing labour market adaptability was acknowledged to be a key challenge by all countries. The role of the Funds in responding to this apparent weakness is therefore of fundamental importance.

The Commission's annual Progress Reports

The Commission assessed the National Reform Programmes in 2006 in its first Annual Progress Report. The main conclusions are that:

- there are important differences in the content of programmes between Member States reflecting their different starting-positions;
- the integration between the macroeconomic, microeconomic and employment dimensions can be strengthened and the National Reform Programmes can be vital means of developing a more coherent approach;
- more efforts are needed to ensure that cohesion policy spending is targeted towards supporting the Lisbon strategy in general. Indeed, it should be programmed to give direct backing to the national reform programmes;
- more needs to be done to create general awareness of and commitment to the Lisbon agenda, since 'public ownership' of the Lisbon growth and jobs strategy at present falls short.

The Commission's second Annual Progress Report, based on Member States Implementation Reports in Autumn 2006, assessed the progress made in economic reform. According to the report, progress has been made towards increasing R&D and innovation, establishing financial sustainability, enhancing the business environment and creating more jobs. However, achieving sound finances in the long term remains an important challenge, labour market reform is occurring only slowly and weak competition especially in services and 'network' industries (telecommunications, broadcasting and so on) is slowing progress in other areas.

There is special focus in the Report on the extent to which Member States are meeting their commitments in relation to the four priority areas and on the follow-up actions needed at EU and national level:

- On research and innovation, although there appears to be a stronger commitment of Member States to R&D, a more strategic approach is needed on innovation.
- On the business climate, the Report notes that reasonable progress has been made in setting up one-stop shops for start-ups, but it calls on the European Council to agree that all Member States should reduce administrative burdens on enterprises by 25% by 2012.
- In the employment domain, it calls on Member States to promote excellence in both research and education, to urgently improve the adaptability of workers and enterprises in order to anticipate, trigger and absorb change and restructuring, to ensure that every school leaver can find a job or a place on a training programme, to increase childcare facilities and to provide incen-

tives for people to prolong their working lives and to increase their participation in training.

- On energy, it emphasises the need to reduce carbon emissions and to promote energy efficiency and the use of renewable energy to tackle climate change.

The Report also concludes that, though real efforts are being made, the pace and intensity of reform and commitment to it differs between Member States. It, therefore, invites the Council to adopt country-specific recommendations in order to accelerate the pace of reform.

Public investment and cohesion policy

The role of public investment in economic growth

There has been much research on the effect on economic performance of public investment, defined, as emphasised at the outset, to include only general government expenditure on fixed capital formation. It is generally agreed by economists that public investment, defined in these terms — on roads, hospitals and so on — contributes to the growth of the economy not only directly but indirectly by boosting productivity in the private sector. While the positive effect of public investment on economic growth has not always been corroborated by empirical evidence[2], a recent survey[3] concludes that there is now a wider consensus on this than in the past, even if the impact reported by recent studies is not as large as some earlier studies suggested.

There is little question that basic infrastructure — including transport networks, in particular — on which most capital spending goes, is essential if businesses are to operate effectively in a modern economy[4].

Accordingly, public capital expenditure tends to be assigned a prominent role in modern theories of economic growth[5] and it is a feature of most economic models that public investment has a lasting effect in strengthening the supply-side of the economy[6]. At the same time, because of the very long-term effects involved — evaluations of large-scale infrastructure projects typically adopt a 25-year time-horizon — it is difficult to quantify at all precisely the contribution of public capital expenditure to economic growth.

Studies have, however, identified factors that tend to maximize the impact of public investment on economic performance. First, the composition of public capital expenditure seems to play an important role since some components have a more direct effect on economic activity than others. These include the construction of road and rail networks, airports, urban transport systems and energy distribution networks. Other components of expenditure which have more social than economic effects, in the short-term

2 A number of empirical studies tend to confirm that public investment has a considerable positive effect on growth (see for example Aschauer, D.A., 'Is public expenditure productive?', Journal of Monetary Economics 23, 177–200), while others find no significant effect (for example, Garcia-Milà T, T.J. McGuire and R.H. Porter, 'The effects of public capital in state-level production functions reconsidered,' Review of Economic and Statistics, 78(1), 177–180.) or even a negative one (Evans P. and G. Karras (1994), 'Are government activities productive? Evidence from a panel of US states', Review of Economics and Statistics 76 (1), 1–11; and Sala-i-Martin X., G. Doppelhofer and R.I. Miller (2004), 'Determinants of Long-term Growth: a Bayesian averaging of classical estimates approach', American Economic Review, 94(4), 813–835). Most of the studies carried out, however, relate to the US.

3 Romp, W. and De Haan, J. (2005), Public capital and economic growth: a critical survey, EIB Papers, Vol. 10. No. 1. pp. 40–70).

4 Investment in human capital is, of course, equally important, as emphasised above and research has demonstrated its significant contribution to productivity and the growth potential of economies. OECD research of the causes of economic growth shows that rising labour productivity accounted for at least half of GDP per capita growth in most OECD countries between 1994 and 2004 (OECD, Education at a glance, 2006).

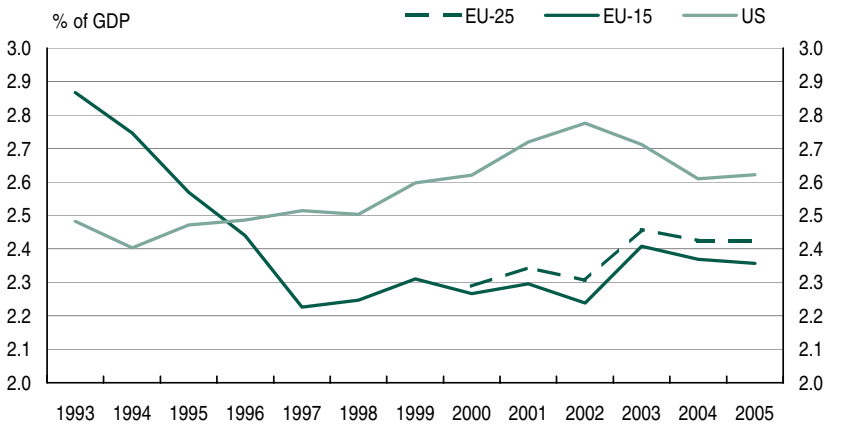
5 Developers of such models include Barro (1990), Government spending in a simple model of endogenous growth, Journal of Political Economy 98 (5), S103–117; Barro and Sala-i-Martin (1992), Public finance in models of economic growth, Review of economic Studies, 59, 645–661; Fisher, T. and S Turnovsky (1998), Public investment, congestion and private capital accumulation, Economic Journal 108, 399–413; Futagami, K., Y.Morita and A. Shibata (1993), Dynamic analysis of an endogenous growth model with public capital, Scandinavian Journal of Economics, 607–625, among many others.

6 For example by encouraging private capital accumulation in Shioji, E. (2001), Public capital and economic growth: a convergence approach, Journal of Economic Growth 6, 205–227; Chatterjee, S. and S.J. Turnovsky (2005), Financing public investment through foreign aid: consequences for economic growth and welfare, Review of International Economics 13(1), 20–44. The three models used in Chapter 2 to estimate the effects of Structural Fund intervention in lagging parts of the EU incorporate this feature.

at least though not necessarily in the longer-term, include the construction of hospitals, schools and public buildings.[7]

Secondly, the overall effect of public investment on growth in the short-term will depend on how it is financed. If by higher taxes, then the positive effect on demand might be offset by the disincentive effects of these. If by borrowing, then this could at times crowd out private borrowing for investment. Cutting government current expenditure to finance capital spending on new infrastructure might also have perverse effects, if, for example, this diverts money away from repairs and maintenance of existing infrastructure[8].

3.1 Change in General Government capital expenditure in the EU and the US, 1993-2005



Source: Eurostat

Thirdly, the impact of public investment on productivity depends on particular features which affect its effectiveness in this regard, such as institutional 'quality'[9], the administrative capacity of the relevant authorities and the standard of management of existing infrastructure.[10] Although these factors have been shown to have a crucial effect on productivity,[11] they are not taken into account in most of the literature.

Fourthly, the effect of public investment on productivity and growth depends on the size of the existing capital stock and on the degree of complementarity with private investment.

In short, public investment in terms of fixed capital formation has an essential role to play in economic development[12], but its impact depends on a range of other factors in addition to the scale of expenditure, not least the investment in human capital.

Public expenditure on fixed capital formation in the EU over the period 1993–2005

Public investment consists not only of expenditure on gross fixed capital formation[13] but also of investment grants and other capital transfers. Such items largely involve the acquisition or disposal of assets and, accordingly, differ from investment in the construction of new buildings, roads and so on in that they simply entail a change in ownership without increasing or reducing the capital stock. The focus here, therefore, is on expenditure on fixed capital formation, which is also the focus of cohesion policy support.

This section reviews the changes in public capital expenditure, first in the EU-15 Member States over the

7 See Aschauer (1989) and Mastromarco, C. and Woitek, U. (2006), Public infrastructure investment and efficiency in Italian regions, J Prod Anal 25, 57–65.

8 See Hulten, C.R. (1996), Infrastructure capital and economic growth: how well you use it may be more important than how much you have, NBER Working Paper No. 5847.

9 See for example Acemoglu D., S. Johnson and JA Robinson (2001), The colonial origins of comparative development: an empirical investigation, American economic Review 91, 1369–1401; Hall RE and CI Jones (1999), Why do some countries produce so much more output per worker than others? Quarterly Journal of Economics 114, 83–116.

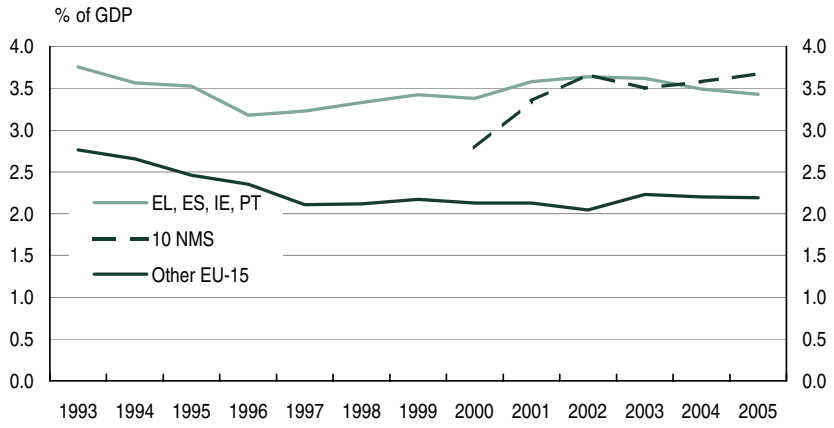
10 See Hulten, C.R. (1996), Infrastructure capital and economic growth: how well you use it may be more important than how much you have, NBER Working Paper No. 5847.

11 See World Development Report 1994: Infrastructure for Development. World Bank, 1994, Washington D.C.

12 Chatterjee, S. and S.J. Turnovsky (2005), Financing public investment through foreign aid: Consequences for economic growth and welfare, Review of International Economics 13(1), 20–44.

13 According to the European System of Accounts 95, gross fixed capital formation includes items such as dwellings, other buildings and structures, machinery and equipment, and computer software.

3.2 Change in General Government capital expenditure in the EU, 1993-2005



Source: Eurostat

period 1993–2005, distinguishing the four Cohesion countries (COH4) from the others (EU11); and secondly, in the 10 new Member States (NM10) which joined the European Union on 1 May 2004, over the period 2000–2005 (no comparable data are available for the new Member States before then or for Bulgaria and Romania).

Public investment activity in EU-15 (1993–2005)

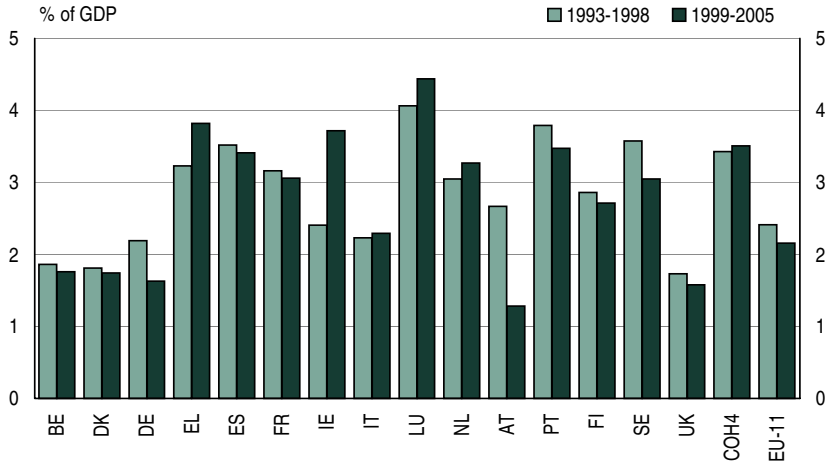
Public investment in EU-15 both in relation to GDP and as a share of total primary expenditure has fallen markedly since 1993, when it amounted to around 2.9% of GDP, more than in the US (2.5% of GDP). Twelve years later, in 2005, public investment outlays had declined to 2.4% of GDP, slightly below the level in the US which had risen marginally over the period (Fig. 3.1).

While the general trend in public investment has been downwards, there are considerable variations between countries. In the four EU-15 Cohesion countries, public investment is not only significantly higher relative to GDP than in other EU-15 Member States (around 50% higher), but has risen slightly since 1995 rather than fallen (Fig. 3.2).

The average level of investment in the 7 years 1999–2005 was, therefore, marginally higher in the four Cohesion countries than in the 6 years 1993–1998, while in the other 11 Member States it was lower, with only three countries (Luxembourg, the Netherlands and Italy very slightly) showing an increase (Fig. 3.3).

After declining at more or less the same rate between 1993 and 1996, public investment in the four Cohesion countries started recovering some years earlier than in the rest of the EU-15 and, apart from a small fall in 2000, continued to increase up to 2003, by which time it was 0.5 of a percentage point higher than 7 years earlier. By contrast, in the rest of the EU-15, the level was much the same in 2003 as in 1996. The higher level of public investment in the Cohesion countries and the growth over the period 1996–2003 is almost certainly due in part to the substantial EU support for investment under cohesion policy.

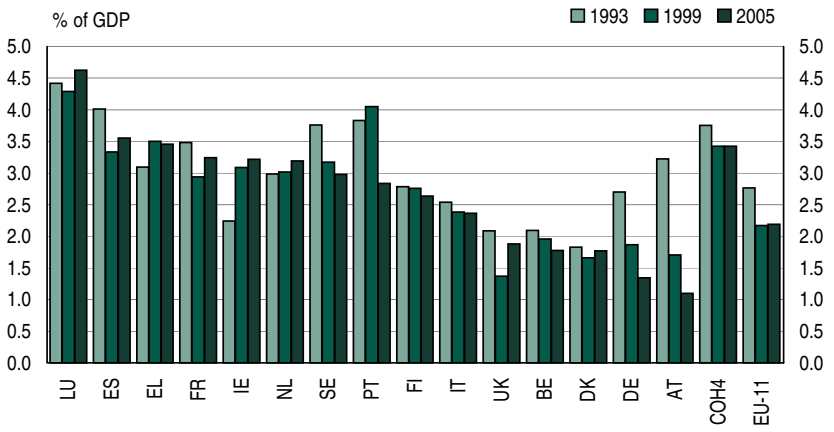
3.3 General Government gross fixed capital formation, average 1993-1998 and 1999-2005



Source: Eurostat

In the non-Cohesion countries, public investment declined by around 0.6% of GDP over the period 1993–1998, which coincided with the first two phases of EMU, with only Finland and Luxembourg showing an increase, in the former reflecting the substantial fall which occurred before 1993. The largest reductions were in Austria, Germany, the UK and France. In the four Cohesion countries, there were reductions in Portugal and, more especially, in Spain, while in Greece and Ireland, public investment increased (Fig. 3.4).

3.4 General Government capital expenditure in the EU-15, 1993, 1999 and 2005



Source: Eurostat

In the years 1999–2005 which coincide with the introduction of the Euro, public investment increased relative to GDP in Spain and Ireland but declined in Greece and Portugal. In the other 11 EU-15 Member States, 7 showed an increase in public investment in relation to GDP, while in the other four (Germany, Austria, Finland and Sweden), it fell.

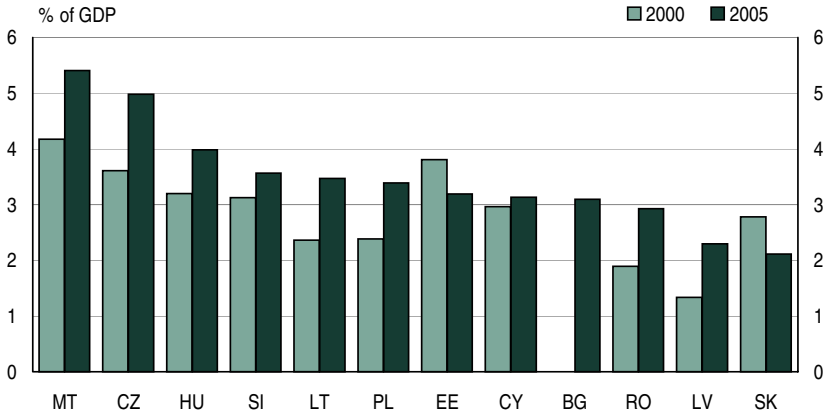
Public investment in EU 10 (2000–2005)

In the new Member States, public investment increased markedly in the two years, 2000 to 2002, rising from 2.8% to 3.7% of GDP, i.e. to a similar level as in the four EU-15 Cohesion countries. Although, investment fell in 2003, it rose significantly between then and 2005 (by 0.4% of GDP). Except in Estonia and Slovakia, public investment increased relative to GDP in all the countries over the period 2000–2005 (Fig. 3.5). The largest increases occurred in the Czech Republic and Malta, raising public investment in these two countries to over 4% of GDP. Latvia apart, public investment was higher than the EU-15 average over this period in all of the new Member States.

Over the period 2000–2005, public investment relative to GDP was much higher on average in the new Member States than in the rest of the EU — as in the four Cohesion countries, around 50% higher. If they are to catch up in terms of infrastructure endowment, then investment needs to remain relatively high, though at the same time, it is important for it not to jeopardise fiscal stability.

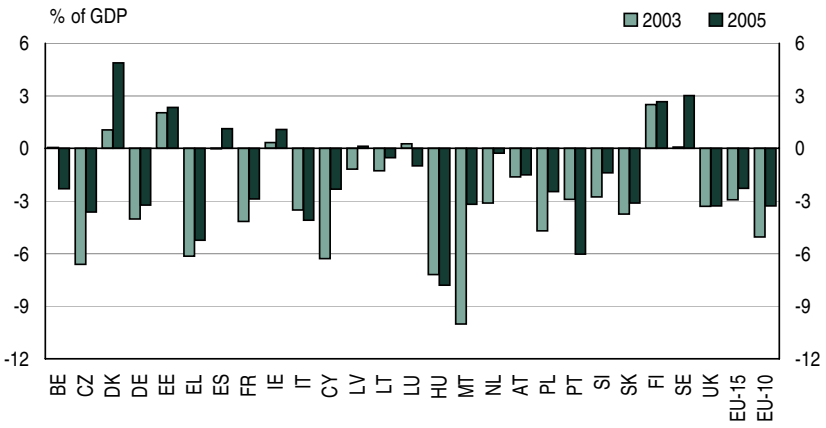
The increase in investment which has occurred in the new Member States in recent years has in fact taken place alongside fiscal consolidation. In all of

3.5 General Government capital expenditure in the new Member States, 2000-2005



Source: Eurostat

3.6 General Government budget balance in the EU-25, 2003 and 2005



Source: Eurostat

the countries, apart from Hungary, where there was a small increase, the budget deficit was, therefore, reduced between 2003 and 2005 — in many cases significantly (Fig. 3.6). Indeed, in 2005, in aggregate, it was only marginally above the limit of 3% of GDP set under the growth and stability pact.

Factors underlying the trend in public investment in the EU

There are a number of factors which might explain the decline in public investment as a share of GDP which has occurred in many Member States since the early 1990s. They include a general tendency towards a shrinking public sector, the increased involvement of the private sector in public sector capital projects and the pressure to reduce overall public expenditure to comply with rules on the budget deficit. It is also the case perhaps that the need for public investment has diminished in countries which are already well endowed with infrastructure.

Joint public-private sector initiatives — or public-private partnerships — in this area have increased in importance in many countries in recent years and now account for a significant proportion of the finance going into public investment. Since the private sector element of this is not counted as public expenditure, this in itself could explain all or part of the fall in investment spending. Unfortunately, the data are not readily available to verify this[14].

There is some evidence that public investment has been reduced during periods of budgetary consolidation in EU-15 Member States. This is especially the case in the run-up to economic and monetary union in the years 1993–1998. In this period, when compliance with the Maastricht criteria for adopting the single currency meant that budget deficits needed to be kept below 3% of GDP, public investment in most Member States declined relative both to GDP and to primary expenditure[15]. Greece and Ireland, however, were two of only four exceptions (the others were Finland and Luxembourg), perhaps because of the support for investment under cohesion policy. Nevertheless, reductions in current primary expenditure and lower interest payments were at least as important in reducing budget deficits in most countries as cut-backs in investment (Table 3.1).

In the second period of consolidation between 2003 and 2005, the picture is less straightforward, though more countries reduced public expenditure as part of their efforts in this direction than increased or maintained it (Table 3.2). Of the 7 Member States which

14 Currently, such PPP initiatives cover more than 15% of the finance provided yearly to publicly sponsored investment projects in the UK. In other European countries like Germany, Spain, France, the Netherlands, Portugal, Austria, Finland and Greece, PPP projects have been recently carried out, mainly in transport. Almost all the other EU Member States have planned PPP projects.

15 See also Public Finance Report 2003 which distinguished several sub-periods between 1991 and 2002: the first. 1991–1993, the second, 1994–1998 and the last, 1999–2002. In this section, two periods have been chosen for examination: 1993–1998 and 2003–2005. Both are characterised by strong fiscal consolidation when the cyclical adjusted primary balances (CAPB) of the EU-15 and nominal government budgetary balances increased — ie moved towards surplus — significantly. In particular, during the first period CAPB increased by 2.3% of GDP and during the second period by 0.5% of GDP. During this latter period, the CAPB of Member States which joined the EU in 2004 increased by 1.2% of GDP, as result of lower debt interest payments (0.2 % of GDP) and a reduction in cyclically-adjusted primary deficit (by 1.1 % of GDP).

3.1 Change in Government revenue and expenditure, 1993–1998

	Total revenue	Debt interest	Other current expenditure	Gross Fixed Capital Formation	Other capital	General Government balance	Cyclically adjusted balance
						percentage point of GDP	
BE	2,0	-3,4	-0,9	-0,4	0,3	6,5	2,3
DK	-0,5	-2,6	-1,8	-0,1	0,2	3,9	-1,6
DE	0,6	0,1	0,9	-0,9	-0,4	0,8	1,1
IE	-4,9	-3,2	-6,6	0,4	-0,5	5,0	-1,0
EL	6,6	-3,3	1,8	0,5	-1,4	9,1	5,7
ES	-0,1	-1,0	-1,4	-0,4	-0,6	3,4	1,4
FR	1,6	0,0	-1,5	-0,7	0,4	3,3	2,5
IT	-0,1	-4,5	-2,5	-0,2	0,1	7,0	1,6
LU	3,2	-0,0	1,4	0,1	-0,2	1,9	3,6
NL	-6,8	-1,5	-7,6	-0,0	0,3	1,9	-1,3
AT	-1,5	-0,6	-2,1	-1,4	0,8	1,7	0,6
PT	1,2	-4,1	0,7	-0,1	0,0	4,7	-0,7
FI	-2,2	-0,9	-9,7	0,1	-1,7	10,0	3,9
SE	1,1	-0,4	-7,8	-0,6	-3,4	13,2	10,2
UK	2,2	0,4	-4,8	-0,7	-0,5	7,8	6,9
EU-15	0,5	-0,8	-1,3	-0,6	-0,2	3,4	2,2

EU-15 and ES: 1995-1998
Source: Eurostat

3.2 Change in Government revenue and expenditure, 2003–2005

	Total revenue	Debt interest	Other current expenditure	Gross Fixed Capital Formation	Other capital	General Government balance	Cyclically adjusted balance
						percentage point of GDP	
BE	-1,2	-1,0	0,2	0,1	1,9	-2,4	-3,3
CZ	-0,3	0,0	-2,4	0,4	-1,4	3,0	2,2
DK	1,7	-0,7	-1,5	0,2	-0,0	3,8	2,6
DE	-0,9	-0,2	-1,3	-0,2	-0,0	0,8	0,6
EE	-1,8	-0,0	-0,2	-1,0	-0,9	0,3	0,1
IE	1,3	-0,2	1,5	-0,6	-0,5	1,1	1,4
EL	-1,4	-0,8	-0,2	-0,6	-0,9	1,2	-0,1
ES	1,2	-0,6	0,5	-0,0	-0,0	1,3	1,0
FR	1,7	-0,1	0,3	0,2	0,6	0,7	1,5
IT	-0,8	-0,5	0,8	-0,1	-0,3	-0,7	-0,5
CY	2,4	0,0	-1,2	-0,2	-0,1	4,0	4,3
LV	2,7	-0,1	-2,3	0,8	3,0	1,3	0,9
LT	1,1	-0,4	0,2	0,5	0,1	0,7	0,5
LU	-0,3	-0,0	0,7	0,0	0,3	-1,3	-1,0
HU	0,3	0,1	0,6	0,5	-0,3	-0,6	-1,2
MT	5,7	0,3	1,2	0,3	-3,0	6,8	7,7
NL	1,2	-0,2	-0,8	-0,4	-0,3	2,8	2,8
AT	-1,0	-0,2	-1,1	-0,1	0,2	0,2	-0,1
PL	1,0	-0,2	-0,1	0,1	-1,0	2,2	1,7
PT	-1,1	-0,1	2,2	-0,3	0,1	-3,0	-2,7
SI	0,5	-0,4	0,1	0,3	-0,9	1,4	0,6
SK	-1,7	-0,8	-2,6	-0,5	1,6	0,6	-0,5
FI	0,2	-0,2	0,2	-0,2	0,4	0,1	-0,1
SE	1,1	-0,4	-1,5	-0,1	0,1	2,9	2,0
UK	1,3	0,1	1,0	0,1	0,1	0,1	0,3
EU-15	0,3	-0,3	-0,1	-0,1	0,0	0,6	0,6
EU-10	0,4	-0,2	-0,7	0,2	-0,7	1,8	1,2

Source: Eurostat

had a deficit in 2003 which was reduced in the succeeding two years, both in nominal and cyclically-adjusted terms, four reduced public investment relative to GDP (Germany, Greece, the Netherlands and to a lesser extent Austria), two increased it (France and UK) while in the seventh, Spain, it was maintained at the 2003 level. In the latter three countries, cutbacks in investment seem to have been avoided by increases in revenue from taxes and other sources. In the Netherlands, there were also revenue increases, though these were coupled with reductions in public investment as well as in current primary expenditure to achieve a significant transformation of the fiscal position. In Germany, however, revenue declined and more of the fiscal consolidation was secured by reducing current primary expenditure rather than public investment. In Greece, where there was also a decline in tax revenue, the decline in public investment was largely a consequence of the substantial expenditure on the Olympic Games coming to an end.

In general, the size of budgetary adjustment achieved by reductions in public investment during the second sub-period was significantly smaller than in the first and other components of the budget, including lower debt interest payments, contributed more to consolidation.

Of the Member States which had a budget surplus in 2003 which increased further by 2005, three countries, Ireland, Finland and Sweden, reduced public investment as part of the means of achieving this, while in Denmark, it increased.

For the new Member States, the link between fiscal consolidation and reductions in public investment is also ambiguous. Apart from Hungary, all the new Member States reduced their budget deficits or increased their surpluses between 2003 and 2005 both in nominal and cyclically-adjusted terms. Only in Cyprus, Slovakia and Estonia, however, was public investment reduced relative to GDP. In the other countries, public investment was expanded without compromising budgetary consolidation.

The contribution of cohesion policy to public investment[16]

Over the period 1994–1999, ERDF and Cohesion Fund transfers together (termed 'the Funds' in what follows) amounted to EUR 109.6 billion (or EUR 18.3 billion a year)[17], while over the period 2000–2006, they totalled EUR 143, 6 billion (or EUR 20.5 billion a year) at 1999 prices[18].

Their importance to recipients is reflected in their contribution to public investment in the Member States, especially in the four Cohesion countries. Between 2000 and 2006, transfers from the Funds amounted, on average, to an estimated 60% or so of total public capital expenditure in Portugal, 48% in Greece and 24% in Spain. Over the same period, transfers to Italy, Germany and Ireland are estimated at around 9.0% of public investment. Between the two periods 1994–1999 and 2000–2006, transfers from the Funds declined in relation to public investment in most EU-15 Member States, particularly in Ireland and Greece but increased in Portugal, Germany, Finland, Sweden and Austria (Fig. 3.7).

These transfers almost certainly increased public investment relative to GDP across the EU, most especially in the Cohesion countries since the principle of additionality means that national expenditure should have been maintained at least at the same level as it otherwise would have been.

In the absence of transfers from the Funds, public investment is likely to have fallen as a share of GDP in the four Cohesion countries from 2001 on, whereas in practice, it increased slightly up to 2003. Public investment, therefore, averaged almost 3.5% of GDP over the period 2000–2005, around 25% higher than without transfers (Fig. 3.8). In consequence, without the support of the Funds, these countries would either have to have reduced the scale of expenditure

16 This section is confined to the EU-15 Member States since the necessary data are not yet available for the countries which joined the EU in 2004.

17 ESF is not included as it mostly finances projects which do not include public capital expenditure.

18 Figures relate to commitments rather than actual expenditure in the two periods.

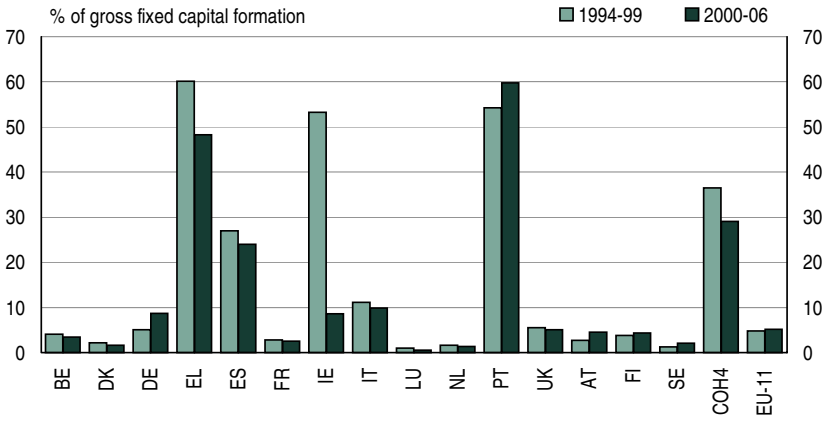
on basic infrastructure necessary to improve their long-term competitiveness and growth potential or to have increased taxes, together with perhaps cutting back on their current spending on equally important education and social programmes.

Regional variations in investment expenditure and the regional contribution of the Structural Funds

The above indicates that public investment relative to GDP tends to be higher in lagging Member States than in more advanced ones and that support under cohesion policy contributes significantly to the higher expenditure.

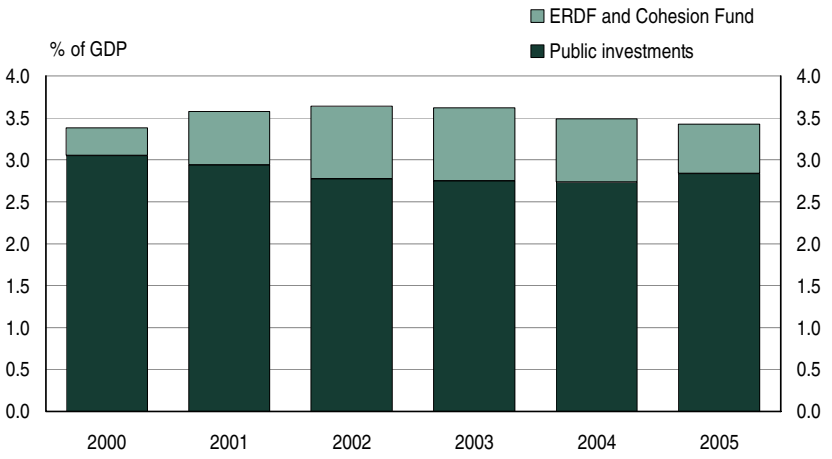
The question addressed in this section is whether similar tendencies are also evident at regional level in non-Cohesion countries, whether regions with the lowest levels of GDP per head have the highest levels of public investment and whether support from the Funds is equally largest in these regions. This is based on two case studies, one for Italy and one for France[19].

3.7 ERDF and Cohesion fund commitments relative to Government investment, average 1994-1999 and 2000-2006



Source: Eurostat

3.8 Public investment and contribution of ERDF and Cohesion Funds (payments) in the Cohesion countries, 2000-2005



Source: Eurostat

Italy

Development related expenditure, defined as capital expenditure plus spending on training, varies markedly across Italian regions relative to GDP, with the less prosperous regions in the South having significantly higher levels than those in the North. In particular, leaving aside Valle d'Aosta, P.A Trento and P.A Bolzano, development-related expenditure in 2003 ranged from over 10% of GDP in Basilicata and Sardegna to under 4% in Lombardia.

Over the period 2002–2004, expenditure supported by the Structural Funds in Italy amounted to EUR 10.5 billion (EUR 7.7 billion in Objective 1 and EUR 2.9 billion in Objective 2 regions)[20]. This represents just under 11% of development-related expenditure in Objective 1 regions and just under 2% of expenditure in Objective 2 regions. The contribution for Ob-

19 Lack of harmonised and comparable data makes it difficult to carry out this exercise for all Member States. It should be noted that in the following figures for Italy relate to payments rather than commitments as in the case of France.

20 Data provided by the regional public accounts in Italy do not distinguish between ERDF and ESF and other funds.

jective 1 regions varied from 13% in Puglia and 12% in Calabria to 9% in Sardegna (Fig. 3.9).

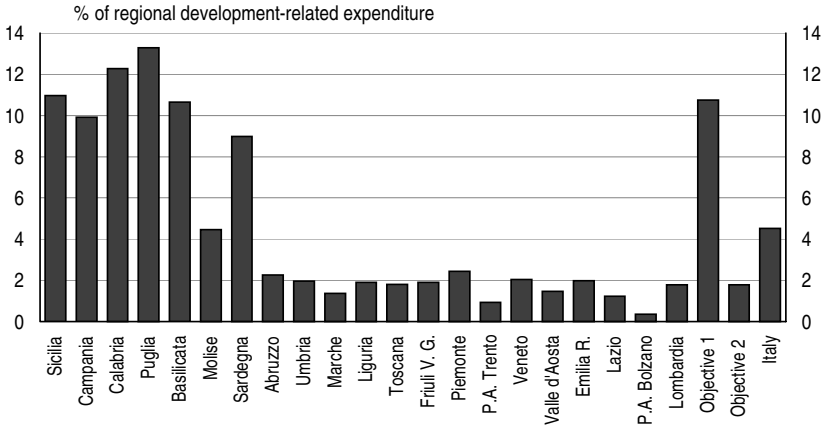
Accordingly, support from the Structural Funds represents a much larger share of GDP in the least prosperous regions in the south than in those in the north.

France

A similar picture is evident for France. Gross fixed capital formation in the public sector varies from around 4% of GDP in both the DOMs and Corse to just 1% in Ile-de-France.

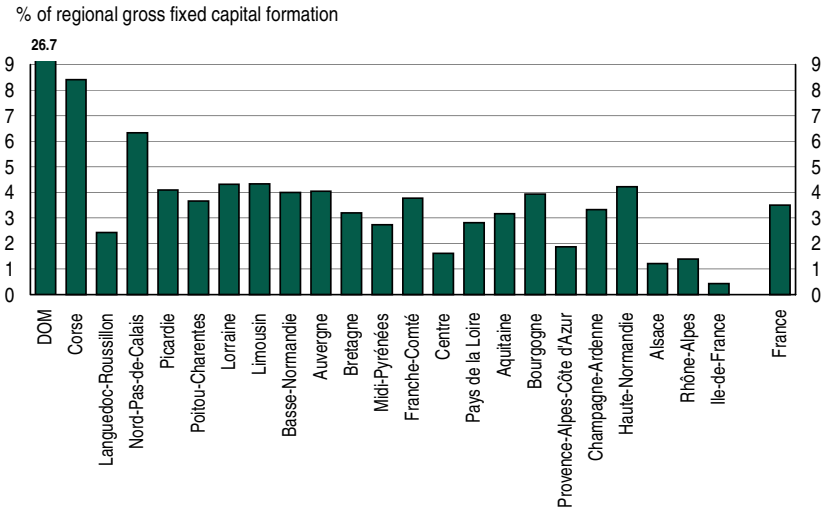
In 2003, total transfers from the ERDF in France amounted to EUR 1.2 billion, two-thirds of which went to mainland France and one third to the DOMs. These transfers represented some 8.4% of public investment in Corse, 6.3% in Nord-pas-de-Calais, 4.3% in Limousin and Lorraine and around 4% in most other regions with relatively low levels of GDP per head. In the four most prosperous regions (Ile-de-France, Alsace, Franche-Comte and Provence-Alpes-Cote d'Azur) ERDF contributions amounted to under 2% of GDP (Fig. 3.10).

3.9 Structural Fund spending by region in Italy, 2002-2004



Regions ordered by level of GDP per head in 2004
Source: Calculations DG REGIO

3.10 ERDF commitment by region in France, 2003



Source: Calculations DG REGIO

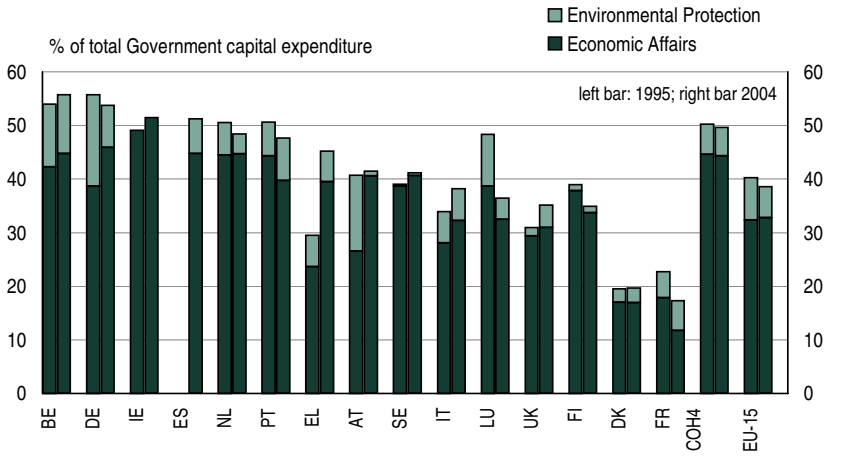
The composition of public investment expenditure in the EU

Public investment is broken down in the national accounts into 10 categories according to the function involved — general public services, defence, public order and safety, economic affairs, environment protection, housing and community amenities, health, recreation-culture and religion, education and social protection.

Of these, economic affairs, which covers investment in transport and communications, energy and R&D related to economic development — i.e. basic infrastructure — is by far the largest single category, amounting to 0.8% of GDP on average in the EU-15 countries in 2004 and 1.5% of GDP in the four cohesion countries. In the latter, this represents some 45% of all public investment as compared with just under a third in the total EU 15 countries (Fig. 3.11).

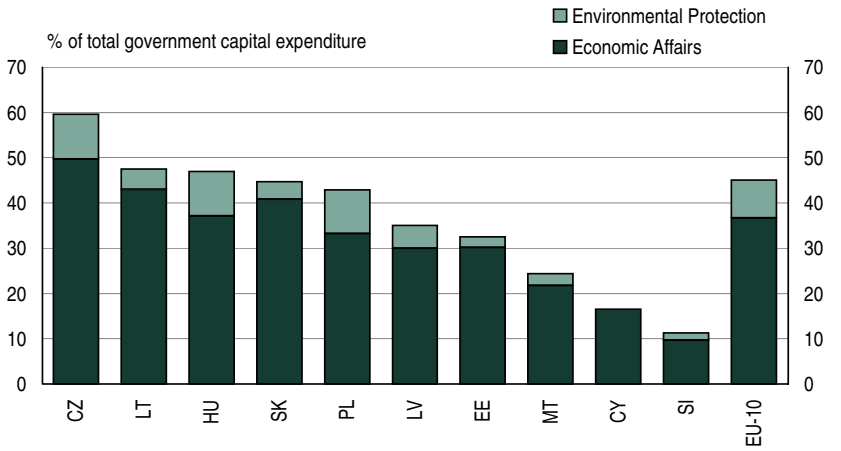
A similar pattern is evident for the new Member States, public investment in economic affairs averaging some 1.3% of GDP or around 37% of the total, higher than the EU-15 average but less than in the four Cohesion countries (Fig. 3.12) The relative scale of this item, however, varied markedly across countries, from around half of all public investment in the Czech Republic and over 40% in Lithuania and Slovakia to only 17% in Cyprus and 10% in Slovenia (equivalent to only 0.3% if GDP).

3.11 General Government capital expenditure in economic affairs and environmental protection in the EU-15, 1995-2004



Source: Eurostat

3.12 General Government capital expenditure on economic affairs and enviromental protection in the 10 new Member States, 2004



Source: Eurostat

The composition of public investment in the EU-15 has changed in some degree since 1995. The biggest increase over the period 1995–2004 was in general public services (by 2.5 percentage points) followed by health care and education (by around 1 percentage point). The share of public investment accounted for by economic affairs also increased if by slightly less (by half a percentage point), so remaining unchanged in relation to GDP (at around 0.8%).

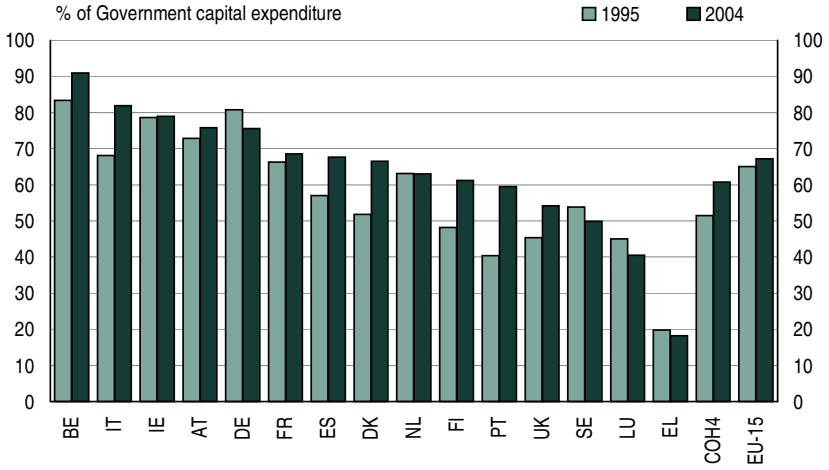
In the Cohesion countries, investment in economic affairs increased significantly in Greece and Ireland in relation to both GDP (by almost 1 percentage point) and total capital spending, while it declined in Portugal (though increasing slightly after 2000). In Spain, spending on economic affairs declined marginally as a share of total public investment between 2000 and 2004 but rose slightly relative to GDP (no data are available for earlier years). In the rest of the EU-15, public investment in economic affairs increased relative to total investment between 1995 and 2004 in all countries apart from France, Luxembourg and Finland, but fell slightly in relation to GDP.

In overall terms, the composition of public investment in the EU-15 trended to shift over this 9-year period from defence, environment protection and housing and community amenities towards general public services, health, education, public order and security and economic affairs.

Public investment and differences in systems of government in the EU

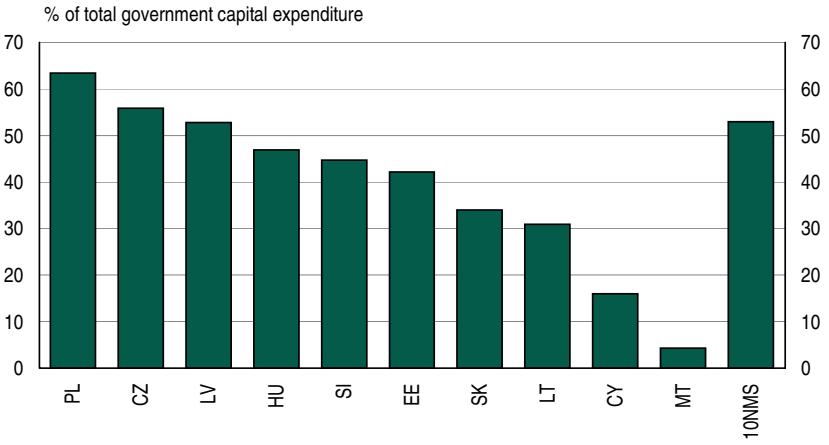
Systems of government and the extent of responsibility for public investment vested in regional and

3.13 Capital expenditure by regional and local authorities, 1995-2004



Source: Eurostat

3.14 Capital expenditure by regional and local authorities in the 10 new Member States, 2004



Source: Eurostat

local authorities as opposed to central government[21] differ markedly across the EU. The level of responsibility of such authorities tends, not surprisingly, to be highest in federal systems, where the share of public investment controlled by regional and local authorities amounts to over 90% in Belgium, around 75% in both Germany and Austria and just under 70% in Spain. It is also relatively high in two unitary states, Italy and Ireland, at around 80%, while in another five countries, it is between 60% and 70%. At the other extreme, the share is under 20% in Greece and around 40% in Luxembourg, though these are the only two Member States where regional and local authorities are responsible for much under half of public investment (Fig. 3.13).

Greece and Luxembourg are among the few countries where the responsibility for public investment of regional and local authorities has declined in recent years (the others are Germany and Sweden). Indeed, in many countries, there has been a significant increase in the share of investment under their control — by over 10 percentage points between 1995 and 2004 in Denmark, Spain, Italy, Portugal and Finland and by 9 percentage points in the UK. This reflects a deliberate policy of devolving responsibility for expenditure to the regional and local level.

In the new Member States, responsibility for public investment tends to be more centralised, partly reflecting their generally smaller size. In only three countries, Poland — where the figure is just over 63% — the Czech Republic and Latvia, is the share of regional and local authorities over half. In Slovakia, it is only 34%, in Lithuania, just over 30% and in Cyprus just 16%, while in Malta, it is under 5% (Fig. 3.14).

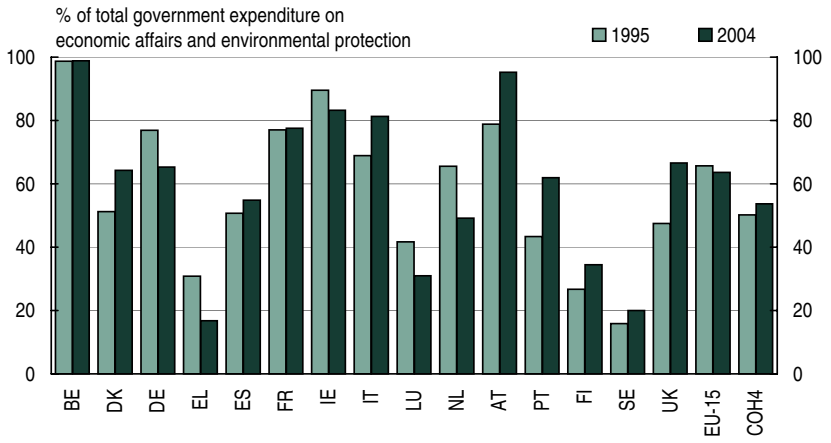
In most EU-15 Member States, including in three of the four Cohesion countries (the exception is Greece), the responsibility for public investment on economic affairs — i.e. much of core infrastructure — lies more with regional and local authorities than with the cen-

21 The fact that spending is made by local authorities need not mean that is financed from taxes levied locally. In most multiple tier systems central government partly finances local and regional authority expenditure by means of grants or transfers. This is intended to help correct for imbalances in resources between authorities in different areas.

tral government (Fig. 3.15). (The exceptions in the rest of the EU-15 are the Netherlands, Finland and Sweden.) These also have most of the responsibility for investment in education, housing and community amenities and environmental protection.

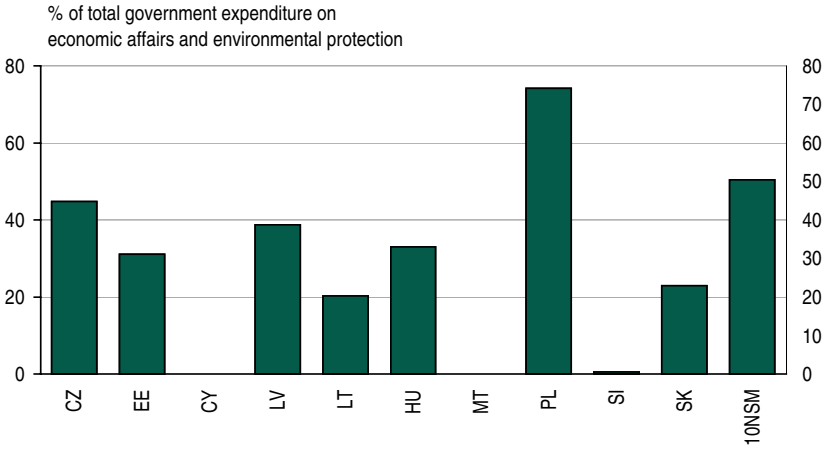
In the new Member States, by contrast, responsibility for public investment in economic affairs is vested mostly with the central government (Fig. 3.16). The one exception is Poland, where almost 70% of public investment in this area was controlled by regional and local authorities in 2004. In the other 9 countries, central government accounts for over 70% of such investment in all except the Czech Republic, where the share was only slightly lower (66%).

3.15 Capital expenditure on economic affairs and environmental protection by regional and local authorites in the EU-15, 1995 and 2004



Source: Eurostat

3.16 Capital expenditure in economic affairs and environmental protection by regional and local authorites in the 10 new Member States, 2004



CY and MT = 0
Source: Eurostat

This division of responsibility can affect the 'quality' of public investment and its contribution to higher productivity and growth in regional economies, insofar as authorities at the regional and local level are likely to have a better understanding of local needs and are perhaps in a better position to tailor investment programmes to meet this. A recent study in Spain, for example, has shown that decentralisation of responsibility can achieve a more efficient allocation of investment at regional level, especially as regards road building and education[22].

In addition, devolution of responsibility for investment to the regional and local level appears to facilitate the absorption of Cohesion funding. Actual (certified) expenditure from the Funds relative to the budgeted amount for the period 2000–2006, therefore, tended to be higher in countries where the share of investment controlled by regional and local authorities was comparatively large.

Such decentralisation, however, needs to be accompanied by administrative efficiency at regional and local level coupled with effective management and control systems if it is to be of benefit and provide a better basis for supporting economic development.

22 Alejandro Esteller and Albert Sole "Does decentralisation improve the efficiency in the allocation of public investment? Evidence from Spain" Institut d'Economia de Barcelona, Working Document 2005/5.

Strengthening the supply side of the economy and ensuring economic stability

The above analysis has shown that the new Member States have succeeded in recent years in reducing their budget deficits while at the same time expanding public investment in much-needed infrastructure. The increased support they receive from the Structural Funds and Cohesion Fund in the present programming period will help them to continue investing in infrastructure as well as on other forms of capital to strengthen their capacity to sustain relatively high rates of economic growth.

At the same time, however, this additional finance, which is substantial in many cases (amounting to up to 4% of GDP), will add to demand in the economy and could fuel inflation both directly through overheating and inducing shortages in supply and indirectly by increasing imports and putting downward pressure on the exchange rate. This raises the question, therefore, of whether there is a conflict between the maintenance of financial stability and sustaining a high rate of economic growth, or, in other words, of pursuing both real convergence of levels of GDP per head and nominal convergence of inflation rates, budget deficits and public sector debt ratios.

The latter is important not only because the achievement of convergence in these terms represents a condition for the adoption of the Euro (the so-called Maastricht criteria) but more generally because it is likely to be necessary in order to sustain long-term economic growth. It also raises the question of whether cohesion policy in the form of transfers from the Structural Funds and the Cohesion Fund tends to exacerbate this conflict through its effect in pushing up demand.

The concern of this section is to review the evidence on the recent performance of the new Member States in achieving relatively high rates of economic growth and, in particular, on the effect of this on other aspects of policy which are important both in themselves and in sustaining growth over the long-term. These include the budget balance (or the need for government borrowing), the rate of inflation, the exchange rate, interest rates and net export performance. A parallel aim is to consider how far the significant financial inflows which the countries concerned will receive under EU cohesion policy will add to their problems as opposed to helping overcome them.

Growth and the budget balance

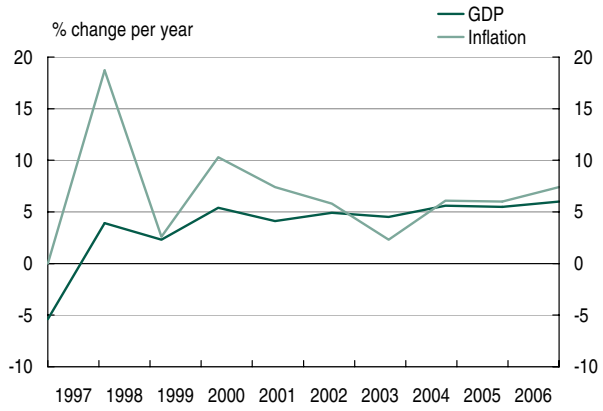
Over the period since 2001, as indicated in Chapter 1, the new Member States, with the sole exception of Malta, have achieved — and sustained — significantly higher rates of economic growth than the rest of the EU. In all, apart from Cyprus and Malta, growth has averaged close to 4% a year or higher over this period. In the three Baltic States, it averaged 8–9% a year. Moreover, except in Hungary, growth rates were higher in the later years of the period than the earlier ones.

These relatively high rates of growth, as noted above, appear not to have been fuelled by fiscal expansion but, on the contrary, to have occurred as budget deficits have generally been reduced. In three countries — Bulgaria, Estonia and Latvia, if only marginally in the last — a budget deficit was transformed into a budget surplus by 2005, while in another three, Lithuania, Romania and Slovenia, the budget deficit was reduced to less than 1.5% of GDP. In another two countries, Cyprus and Poland, the deficit amounted to around 2.5% of GDP, leaving only four countries where the budget deficit was over the 3% limit set by the growth and stability pact. In two of these, however, Malta and Slovakia, the deficit was only marginally above this and in a third, the Czech Republic, the budget deficit was still only 3.6% of GDP, though it had risen between 2004 and 2005. In all three of these countries, the budget deficit was significantly smaller in 2005 than in 2001 and in the years preceding this in Malta and Slovakia (in the Czech Republic, it was marginally less than in 1999 and 2000).

The remaining country, Hungary, is the only one in which the budget deficit was substantially above the 3% limit in 2005 (at 6.5% of GDP) and has shown little tendency to decline since 2003.

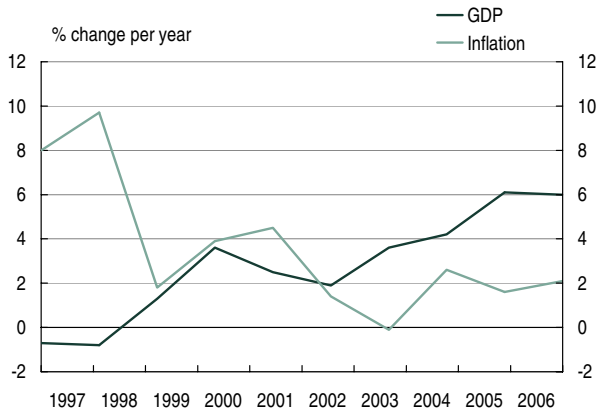
3.17 Change in GDP and inflation in the new Member States, 1997–2006

Bulgaria



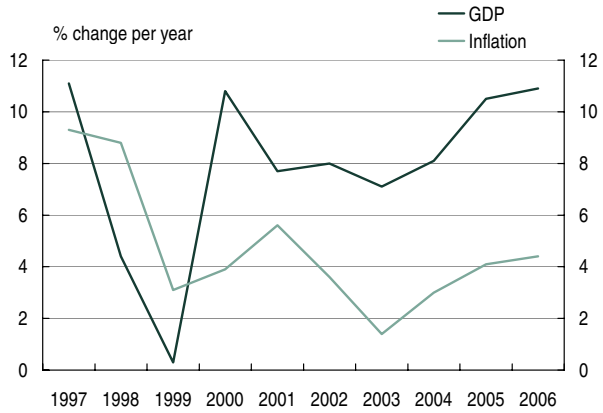
Source: Eurostat

Czech Republic



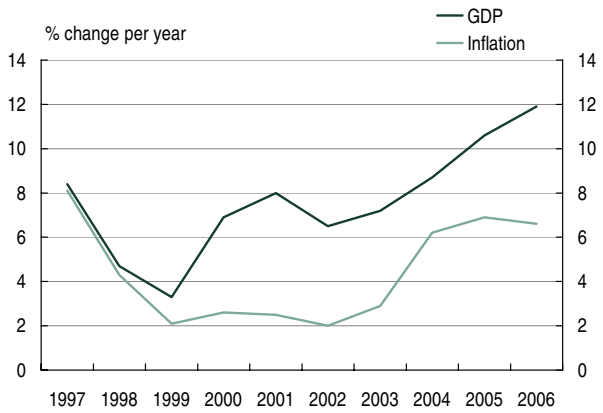
Source: Eurostat

Estonia



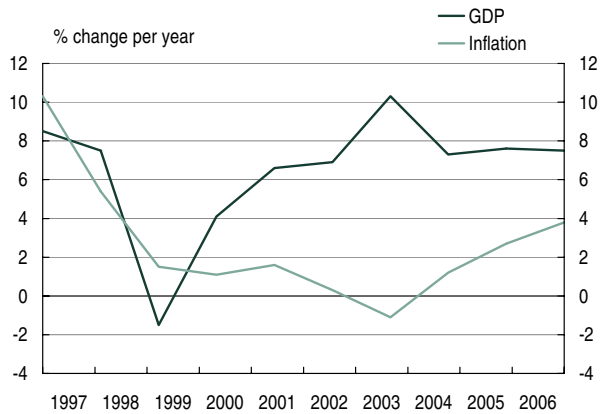
Source: Eurostat

Latvia



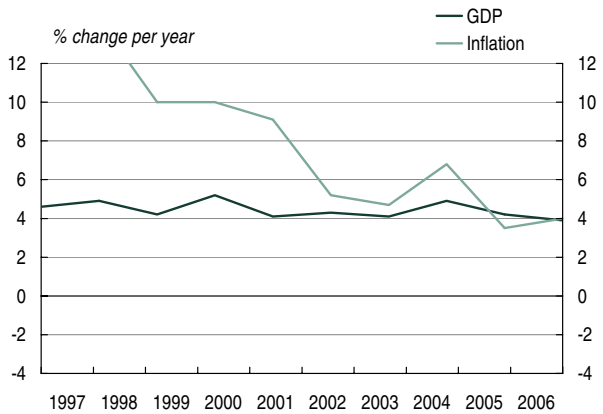
Source: Eurostat

Lithuania



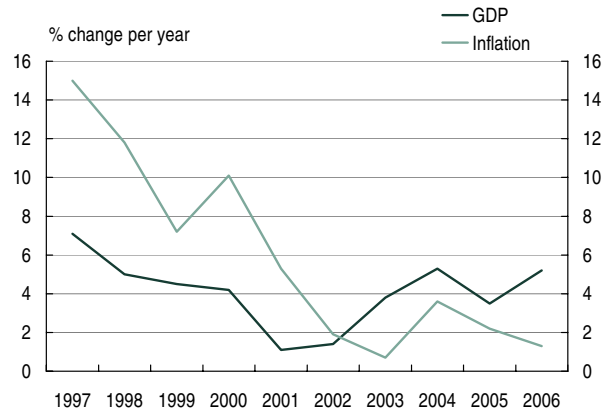
Source: Eurostat

Hungary



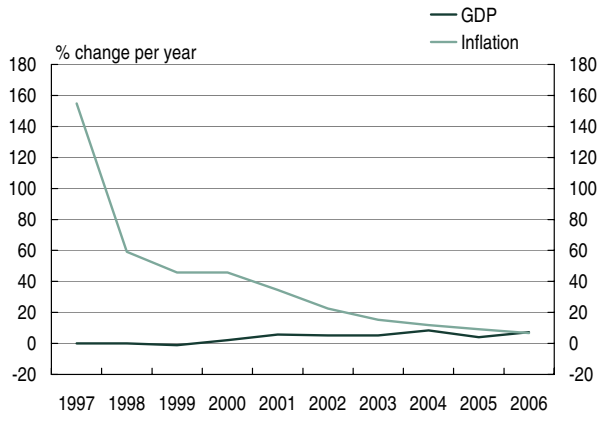
Source: Eurostat

Poland



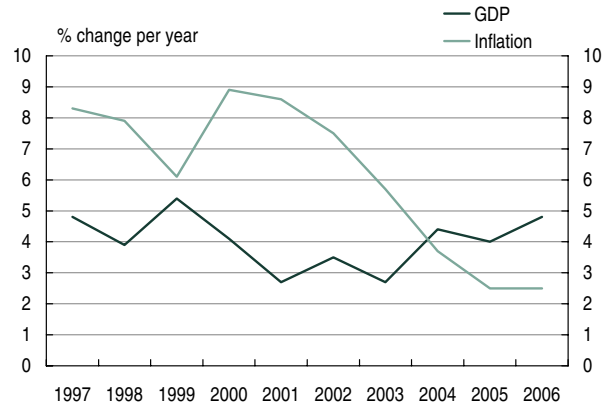
Source: Eurostat

Romania



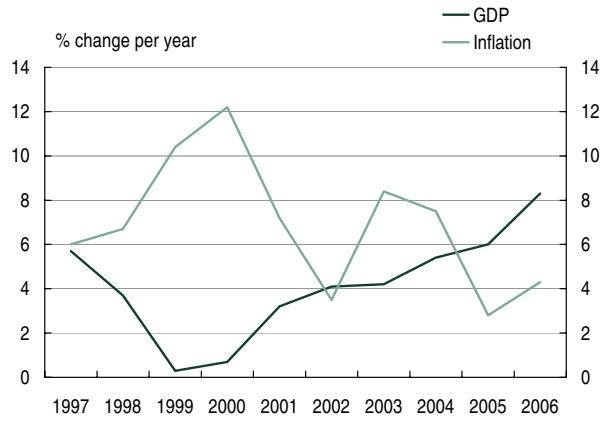
Source: Eurostat

Slovenia



Source: Eurostat

Slovakia



Source: Eurostat

Growth and inflation

The relatively high rates of growth have been accompanied in most of the countries by either declining or stable rates of inflation (measured by the harmonised consumer price index). The only two countries in which inflation was higher in 2006 than in 2001 are Latvia and Lithuania, and only in the latter was there a progressive increase in inflation over the period (from -1% in 2003 to nearly 4% in 2006). In Latvia inflation has remained at 6–7% since 2003 (Fig. 3.17).

Nevertheless, inflation in most cases has remained above that in the Eurozone. Only in the Czech Republic and Poland, was the rate of inflation in 2006 below the average in the Eurozone (2.2%) — though in Cyprus, it was the same and in Malta and Slovenia, only slightly above (around 2.5% in both cases).

In Estonia, Hungary and Slovakia, as well as in Lithuania, it was around 4% or just above and in all four cases, higher in 2006 than in 2005. In the remaining three countries, it was well over 6% in 2006 — in Bulgaria, over 7%. In both groups of countries, in particular, therefore, the continuation of inflation at a relatively high rate could pose a risk to the maintenance of high rates of GDP growth. Accordingly, in these countries perhaps more than elsewhere, there is a need to ensure that economic policy is judiciously managed to minimise this risk.

Growth and exchange rates

Rates of inflation above the EU average can lead to financial instability and a loss of confidence in the currencies concerned. The growth which has occurred over the present decade in the new Member States, however, has done so in most cases in the context of a relatively stable or appreciating exchange rate. In three countries — Bulgaria, Estonia and Lithuania — a fixed exchange rate against the Euro has been maintained since 2001, while the rate has varied by only 1% or so in Cyprus and has been kept constant since 2003 in Malta. In two other countries, Czech Republic and Slovakia, the exchange rate has appreciated markedly against the Euro over this period (by 20% and 16%, respectively). In Poland, while the exchange rate in 2006 was slightly lower than in 2001 (by just under 6%), it was much the same as in 2002 and has appreciated significantly since 2004, following recovery in economic growth. In Slovenia, though depreciating by around 10% between 2001 and 2004, the exchange rate was then fixed against the Euro in the two years prior to the country joining the Eurozone.

In the three remaining countries, the exchange rate was lower in 2006 than in 2001, in two of them significantly so, but in each case it has remained relatively stable over the past 2–3 years. In Latvia, therefore, where growth has been higher than anywhere else in the Union over this period, the exchange rate depreciated by some 20% between 2001 and 2005 but since then it has been kept constant against the Euro. In Romania, the rate depreciated by around 30% between 2001 and 2003 (and by almost 60% between 1999 and 2003), but since then it has tended to appreciate slightly. Hungary is the only country where the exchange rate depreciated between 2005 and 2006 (by around 6%) but it was still only some 3% lower than in 2001.

In general, therefore, currency depreciation has not been necessary to stimulate or to support economic growth and, as indicated below, significant growth of exports has occurred in most cases with a stable or appreciating exchange rate. The evidence, accordingly, suggests that in most countries, continuing high rates of economic growth should be compatible with exchange rate stability, so long as, of course, inflation is kept in check.

Interest rates

The maintenance of reasonably stable exchange rates has, moreover, been achieved without necessitating high rates of interest to attract capital inflows to support the currency. Long-term interest rates, in nominal terms, have in all the new Member States fallen since 2001, in most cases markedly. In 2006, in all but three countries — Hungary, Romania and Poland — long-term interest rates were within 0.6% of average rates in the Eurozone. In the first two of these, rates averaged just over 7% in 2006, while in Poland, they were just over 5%. In Romania, since inflation was just under 7%, this meant that real interest rates were relatively low, which was also the case in the other new Member States where interest rates were around the Eurozone average — indeed, in Bulgaria and Latvia, real interest rates were negative so giving an incentive to investment.

This leaves only Hungary and Poland where interest rates were relatively high in real terms in 2006. In the former, this reflects the relatively large budget deficit, as noted above, and consequently the need for relatively large government borrowing.

Net export performance

The appreciation of the exchange rate which has occurred in the Czech Republic and Slovakia and the fixed exchange rate regime which has been maintained in a number of other countries seem not to have damaged export performance. In the Czech Republic and Slovakia, growth of exports of goods and services in real terms averaged 11–12% a year over the period 2001–2006 and 14–15% a year over the last three years of the period, substantially higher than in the EU-15 Member States. The growth in exports was very similar in the countries with fixed exchange rates, averaging just below 10% a year in Bulgaria and 11–12% a year in Estonia and Lithuania over the period.

In all of these countries, however, especially in the last three, growth of imports was also relatively high, fuelled by the growth of GDP, though also being necessary in some degree to support this growth. As a result the balance of payments deficit on current account has risen to significant levels, exceeding 10% of GDP in 2005 in Estonia and reaching almost 12% of GDP in Bulgaria. The deficit was also large in Slovakia (just under 9% of GDP), though it was much smaller in the Czech Republic (around 2% of GDP). Nevertheless, as indicated above, these deficits have been financed without the need for high interest rates.

In the other countries, apart from Cyprus and Malta, growth of exports was also relatively high, ranging from just under 9% a year in Slovenia to just below 12% a year in Romania. This growth, however, was outstripped by growth of imports in Latvia and, more especially, in Romania (amounting to 18% a year), leading to current account deficits of almost 13% of GDP in the former in 2005 and just under 9% of GDP in the latter. As in the other countries, the deficit has been financed without the need for high interest rates.

In Slovenia, however, the growth of imports was much the same as the growth of exports and in Hungary and Poland, it was less. In consequence, the current account deficit has not tended to increase much in any of the three countries, though while it has been relatively small in Slovenia and Poland (at around 2% of GDP), in Hungary, it has remained at around 7% of GDP since 2001. In the latter case, moreover, the need for capital inflows to cover the deficit has been associated with relatively high interest rates.

The evidence of recent years suggests, therefore, that the continued high growth of exports which is necessary to support growth of GDP, given the growth of imports, does not seem to require depreciation of the exchange rate to sustain it, though this depends on avoiding high rates of inflation and their damaging effects on cost competitiveness. This high growth, however, has not in many cases matched the growth of imports and relatively large balance of payments deficits on current account have resulted. While these seem to have been funded without the need, in most countries, for high interest rates, they have, nevertheless, led to an inevitable build-up of foreign indebtedness which puts a premium on the maintenance of financial confidence in the coming years if the risk of large-scale capital outflows, high interest rates and exchange rate depreciation is to be avoided.

Growth and cohesion policy

Transfers from cohesion policy should help new Member States sustain high rates of economic growth while at the same time maintaining financial stability and minimising the risk of excessive inflation. Transfers will, therefore, contribute significantly to financing much-needed public investment in infrastructure of various kinds as well as in human capital, so helping to strengthen the supply side of the economy and, accordingly, its growth potential. At the same time, they will reduce the need for government borrowing, so easing the pressure on interest rates, moderating the risk of crowding out private investment and helping to maintain financial market confidence. In sum, support from the Funds should facilitate the task of managing the economy to sustain high rates of growth while keeping inflation in check and avoiding excessive budget deficits and the build-up of public sector debt.

Given the limited endowment of basic infrastructure in a number of countries and the generally poor state of that which exists in almost all of them — as described in Chapter 1 above — allied to their low level of GDP per head, there is little question either about the importance of public investment for sustaining long-term development or about the need for support. While the inflow of funds will tend to increase demand, there is little reason to expect this to fuel inflation given the relatively low employment rates in most of the countries, except perhaps temporarily if expenditure is concentrated in areas where demand is already relatively high. This is all the more the case in view of the low level of productivity which exists in most sectors in almost all

regions and the significant scope for catching up which this implies.

Accordingly, any conflict between the pursuit of real convergence of GDP per head with the rest of the EU and that of nominal convergence of inflation rates, budget deficits and public sector debt ratios is unlikely to be more than short-term in nature. More importantly, by strengthening the supply-side of the economy and its capacity to meet increases in demand, support for public investment from cohesion policy will tend to reduce the extent of any conflict over the long-term.

Chapter 4 — Community policies and Cohesion

Table of Content

Introduction

The negotiation on the budget of the Union for the period 2007–2013 has demonstrated the need for reinforced coherence and complementarity between the different elements of the Union intervention whether under cohesion policy or under other Community policies.

While the Treaty assigns to each policy its own objectives, there is a clear demand for increasing effectiveness of the Union action in different fields, which has become more compelling with the adoption of the Lisbon agenda and its revision in 2005.

Attention needs to be paid to the way in which different policies interact, how and to what extent they are mutually reinforcing and whether more can be done to increase the overall impact of Community action.

This chapter of the report is therefore concerned with recent developments in those Community policies which have a clear link with Cohesion policy and their complementarity with the objectives of the latter. A final section examines the redistributive effect of the Community budget.

EU R&D and innovation policies and cohesion: impact and synergies

The Lisbon agenda is above all related to the building of a knowledge society, in which R&D and innovation play a crucial role. In order to encourage the best use of scarce resources in this regard, the EU has developed a common policy and a number of different instruments for promoting the creation of networks and the achievement of economies of scale in this area.

These policies have a clear European dimension by supporting top-level R&D projects, mobility of researchers throughout the Union, and the creation of trans-national research teams with a view to increasing the overall competitiveness of the EU in the global economy. To this end, they are based on a competitive approach and only the best projects are selected and supported.

EU policies on R&D and innovation do not replace, but support and complement, national, regional and local activities in this area, since R&D and innovation have a clear regional — and even local — dimension. It is in clusters or other informal networks (based on confidence and so often on proximity) that knowledge is disseminated and it is transferred from research and technological centres to businesses. It is also at local level that SMEs seek tailor-made business services and funding adapted to their needs. In this context, the role played by local or regional authorities in fostering such networks or to helping provide suitable services is essential.

In this respect, EU policies on R&D and innovation, on the one hand, and cohesion policy, on the other, play complementary roles in supporting growth and job creation in the Union.

EU R&D and innovation policies to foster regional competitiveness

The Research Framework Programmes

EU R&D policy has traditionally been designed and implemented through successive framework programmes (FP), which have received increasing financial support since their creation in the 1980s. By 2013, support is planned to amount to almost EUR 9 billion, 75% more than the last year of the previous framework period, 2002–2006. R&D projects, submitted by international teams of researchers, are selected at EU level within the thematic strands agreed at the beginning of the period.

The regional dimension was not especially taken into account in the planning and implementation of the first few FPs. As a result, although participation of organisations in Objective 1 regions has increased, it accounted for only 18% of the total participation in the Sixth FP (2002–2006). Participation in projects is closely related to regional and local strengths, with patterns of participation generally reflecting the location — or concentration — of R&D facilities, higher education institutions and, to a lesser extent, firms. This explains why, within the cohesion countries, the main recipients of FP support tend to be situated

in capital city or other economically strong regions (Map 4.1).

The regional or local effects of Framework Programmes are, however, not only related to the pattern of participation across regions. According to studies, the greatest impact has often been on the scientific and technological reputation of the participants and on the development of networks and partnerships, which may have positive consequences in the long-run, but which tend to have limited spill-over effects on the region concerned in the short-run.

It should also be borne in mind that the FPs have traditionally accounted for less than 5% of publicly funded R&D activities in the EU.

With each successive generation, the importance of the territorial dimension in the EU R&D policy has, however, been increasingly recognised. In 2001, the Commission drew attention to the regional dimension of the European Research Area (ERA)[1], where it underlined the crucial role of regional and local actors and the need to extend the benefits of the ERA to all EU regions. As a consequence, a number of measures were introduced in the Sixth Framework Programme, in particular:

- two new initiatives, the Networks of Excellence and the Integrated Projects, aimed at combating the fragmentation of the European research system and at reinforcing links between central and peripheral scientific centres, so adding to overall R&D capacity in the EU and diminishing the brain drain from less favoured to more prosperous regions;

- a doubling of funding for human resource development, with a potentially important effect on less favoured regions through technology transfer schemes and the setting of a spending target of at least 15% of the budget for thematic priorities on SMEs;

- the introduction of a 'bonus' scheme under which successful applicants to the FP6 situated in Objective 1 regions could claim additional financing from the Structural Funds.

In addition, the Regions of Knowledge Pilot Action aimed at promoting the active involvement of local actors in designing regional knowledge strategies, was launched in 2003. It has proved effective in supporting the application of regional foresight and other analytical tools, strengthening clustering, promoting mentoring between regions and fostering public-private partnerships between universities and local businesses. Given its success, a second call for proposals was launched in 2005 (KnowREG 2) with similar objectives.

EU innovation policy

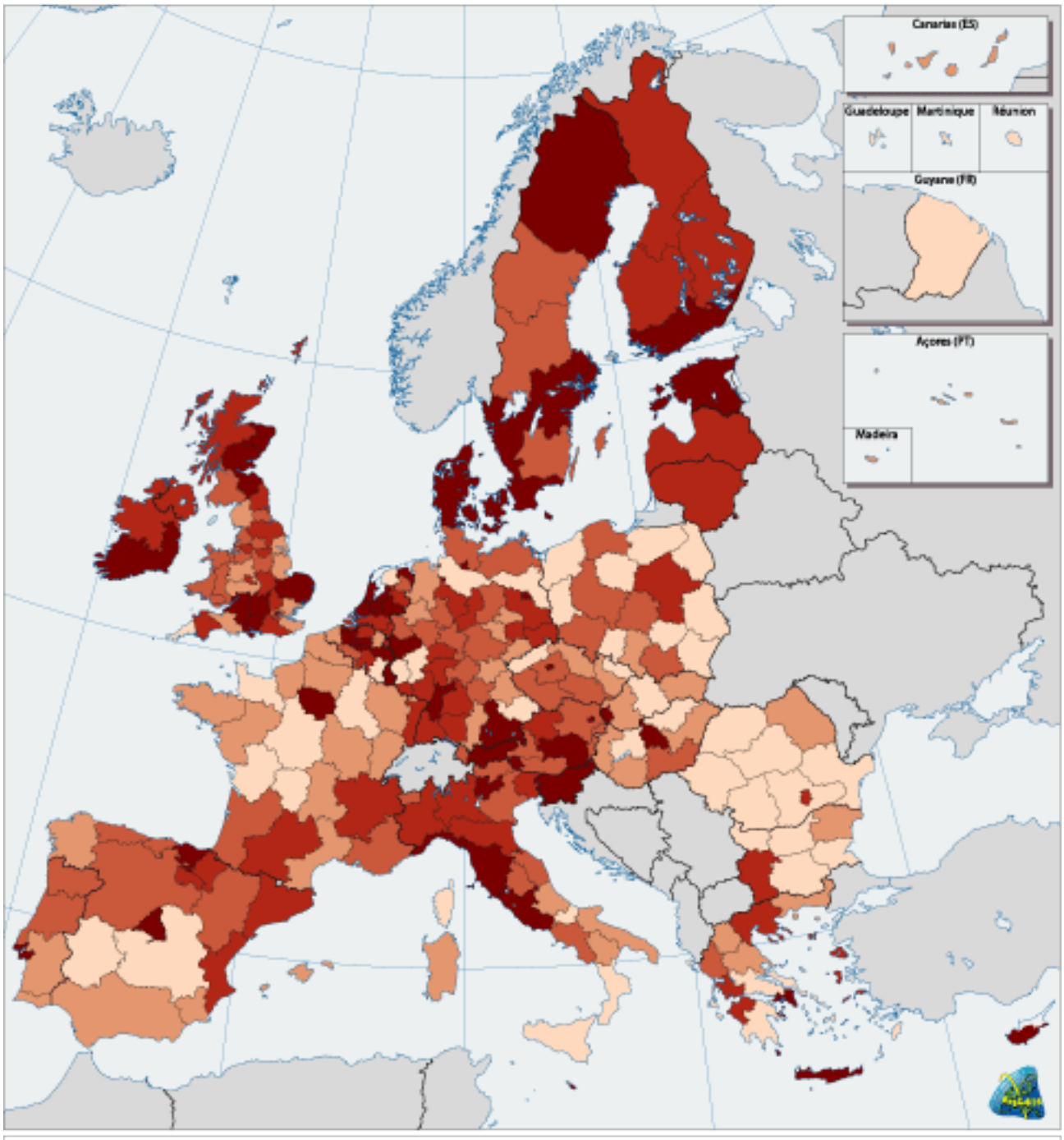
Encouraging innovation, and the development of new products and processes resulting from this, is closely related to the promotion of R&D. EU enterprise, industrial and innovation policies are together aimed at strengthening the competitiveness of the European firms by encouraging entrepreneurship, establishing an environment conducive to innovation and ensuring access to markets.

An action plan for promoting innovation in the EU was launched in 2003 in the context of the Lisbon agenda[2], defining innovation relatively widely to encompass "*the successful production, assimilation and exploitation of novelty in the economic and social spheres*". It recognised the need to strengthen coordination with policy at national level, to reinforce synergies with other EU policies and, in particular, to "*strengthen the regional dimension of innovation policy*". It concluded with a list of measures to be implemented at national and EU level. The main aspects of the action plan were updated in 2005 in the light of the renewed Lisbon agenda[3], with increased emphasis on an integrated approach

1 EC Communication "The regional dimension of the ERA", COM(2001)549 of 3.10.01.

2 EC Communication "Innovation policy: updating the Union's approach in the context of the Lisbon agenda", COM(2003)112 final of 11.3.03.

3 EC Communication "Implementing the Community Lisbon programme: more research and innovation — investing for growth and employment: a common approach", COM(2005) 488 final of 12.10.05.



4.1 Participants in the Sixth Framework Programme

Number per million inhabitants

- < 16.10
- 16.10 - 32.51
- 32.51 - 65.19
- 65.19 - 129.88
- >= 129.88

EU-27 = 92

Data as of July 2006
Sources: DG Research, Eurostat

0 500 Km

covering R&D, innovation and other related policies. In this context, the Commission called for the "*European Structural Funds to drive research and innovation*".

Up to now, EU activities to promote innovation in Europe have been funded from the Framework Programmes, though the scope of these goes well beyond conventional R&D activities. They include several instruments for monitoring innovation policy and performance, as well as a number of practical measures to improve the innovation environment of firms. The former includes the Trend Chart on Innovation in Europe, which compiles, updates, analyses and disseminates information and good practice on innovation policies at national and EU level, and the European Innovation Scoreboard, which compares Member State performance and changes on the basis of available quantitative data.

A number of projects are financed in order to raise awareness among businesses — and SMEs in particular — of the importance of innovation, such as the PAXIS scheme which supports innovative start-ups and their growth by publicising best practice and encouraging networking; the Gate2growth initiative which fosters networks between organisations which finance innovation and entrepreneurship as well as between industrial liaison offices in public research centres with a view to creating and strengthening public-private cooperation by means of incubators, technology transfer offices and the Innovating Regions in Europe (IRE) initiative which provides a means of sharing experience in developing innovation strategies. As part of the IRE initiative, the Mutual Learning Platform (MLP) was launched in 2005 with the aim of developing interactive learning tools (benchmarking, foresight and regional profiles) for regions seeking to implement innovation strategies. In addition, the Innovation Relay Centres have been set up to help firms to network with others, including in other countries, and to cooperate over the development and transfer of technology.

Following the mandate of the 2006 Spring European Council, the Commission produced a roadmap of ten priority actions to promote innovation in the EU[4], drawing attention to the need for complementarity between innovation and cohesion policies at EU level, more innovation-friendly education systems, stronger links between research centres and industry through the promotion of innovative clusters, and the fostering of regional innovation through the new Cohesion Policy programmes.

Looking ahead — more synergy can still be achieved

EU R&D and innovation policies, on the one hand, and Cohesion Policy, on the other, have in the past intervened in similar areas and had complementary approaches and methods as well as a common goal of improving European competitiveness. Nevertheless, there is still room for fine-tuning to achieve more synergy.

For example, as noted above, the Framework Programmes have usually resulted in strong links at EU level but limited spill-overs at regional level beyond the participating organisations. Cohesion programmes, therefore, have a crucial role to play in facilitating intra-regional links and in connecting regional stakeholders with more advanced knowledge networks fostered by the FP in other parts of the EU. The challenge is to ensure that all regions, including the less developed, can reap the benefits of the European Research Area and contribute to the achievement of the Lisbon goals.

To this end, several improvements have been introduced in the current programming period following the agreement on the Financial Perspectives for the period 2007–2013:

- The new *7th Research Framework Programme* (2007–2013), with an overall financial allocation of EUR 53.2 billion, includes several instruments to reinforce the regional dimension. Within the

4 EC Communication "Putting knowledge into practice: a broad-based innovation strategy for the EU", COM(2006)502 final of 13.9.06.

last of its four strands (Cooperation, ideas, people and capacities), FP7 incorporates a number of specific aims with a clear regional impact:

- Support the creation of new infrastructure of pan-European interest and optimise the use of the existing infrastructure needed by the scientific community to remain at the forefront of knowledge (EUR 1.8 billion).

- Assist SME in outsourcing R&D activities by extending their networks, better exploiting R&D results, developing common technical solutions for groups of SMEs with similar problems and acquiring technological know-how (EUR 1.3 billion).

- Strengthen the R&D potential of European regions by nurturing, through the "Regions of Knowledge" initiative, the development of regional "research-driven clusters", associating universities, research centres, firms and regional authorities (EUR 126 million).

- Unlock and develop the research potential in Convergence and outermost regions (EUR 370 million) by supporting transnational secondment of research staff from organisations in these regions to those in more advanced ones, the acquisition of R&D equipment, the organisation of workshops and conferences to facilitate knowledge transfer, and access of research centres to independent evaluation of their potential.

In addition, the Cooperation strand provides support for means of disseminating knowledge and transferring technology, while the People strand includes several initiatives to facilitate training, career development and mobility of researchers, including co-financing of regional, national and international programmes.

FP7 also incorporates a "Risk-Sharing Finance Facility" aimed at fostering private investment in R&D by improving access to EIB loans for large European research projects.

- The *Competitiveness and Innovation Framework Programme* (CIP), has a budget for 2007–2013 of EUR 3.6 billion (over 50% more than for the period 2000–2006), with nearly a third devoted to support of entrepreneurship and innovation. Concrete measures in three sub-programmes are designed to promote:

  - Start up and growth of SMEs: the *Entrepreneurship and Innovation Programme* with a budget of EUR 2.2 billion, including up to EUR 430 million for eco-innovation, will provide access to finance for SMEs, information and advice on single market opportunities and Community matters and assist in establishing a better regulatory and administrative environment for business and innovation.

  - Information and communication technologies: the *ICT Policy Support Programme*, with a budget of EUR 728 million, will support operational demonstrations of technological and organisational solutions to ICT-based services at EU level, addressing interoperability and security issues in particular.

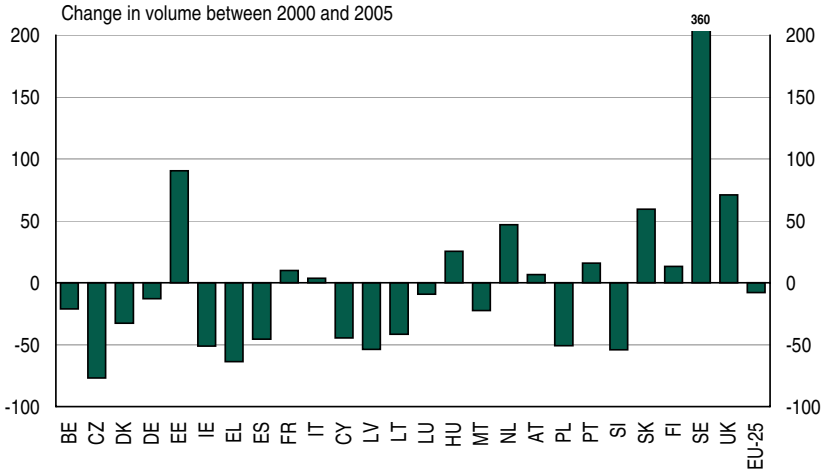
  - The achievement of a 12% share of renewables in total energy consumption by 2010 and a reduction of energy use: the *Intelligent Energy-Europe Programme*, with a budget of EUR 727 million, will support means of increasing energy efficiency, developing new renewable energy sources, and devising technological solutions to reducing greenhouse gas emissions from transport.

Some of the initiatives under the CIP are complementary to activities carried out under Cohesion Policy or FP7, such as help to SMEs to access the latter and to innovative enterprises to secure venture capital to assist them bring their research results to the market. Activities under the CIP can also have a regional dimension, such as fostering clusters or innovation networks or supporting regional programmes for business innovation. In

addition, identifying and analysing examples of excellence which can be adapted and replicated can help make regional interventions more effective in meeting cohesion goals.

As these initiatives under the CIP and FP7 develop, it will be important to evaluate the results and gain a better understanding of the effect in territorial as well as economic terms.

4.1 State aid (excluding agriculture, fishery and transport), 2000-2005



Source: European Commission

Complementarity between state aid and cohesion policy

The Commission has embarked on an ambitious reform of State aid[5], aimed at redirecting them towards the pursuit of the Lisbon objectives, while at the same time modernising their management by increasing the responsibilities of Member States.

This reform will strengthen cohesion in the Union through a revision of the guidelines for regional support as well as through the adoption of measures aimed at safeguarding public intervention to support services of general economic interest (SGEI).

It is also aimed at promoting the conditions for sustained growth in the Union through directing public intervention towards support of risk capital and research and innovation.

The amount and intensity of aid

In line with the undertakings agreed by successive European Councils, the amount of State aid allocated by EU-25 Member States[6], has tended to decline slightly over recent years to a little over EUR 45 billion in 2005 as against EUR 49 billion in 2000, a fall from 0.53% of EU GDP to 0.46% (Fig. 4.1).

Two-thirds (68% in 2005) of aid is accounted for by four Member States (Germany, France, Italy and the UK), which is in line with their share of EU GDP (69% in 2005).

In 2005, State aid amounted on average in the EU to less than EUR 100 per head of population (EUR 98) as compared with levels close to EUR 110 per head in 2001 and 2003. The intensity of aid in these terms, however, varies significantly between countries reflecting differences in approach to public intervention in economic activities (Fig. 4.2).

Excluding Malta, where aid amounted to almost EUR 300 per head in 2005, or 2.6% of GDP, reflecting significant transitional and 'phasing out' schemes, as well as Cyprus, which was in a similar position, aid intensity ranged from over EUR 150 per head (in Germany, Denmark and above all in Sweden, at EUR 292 per head) to less than EUR 50 per head (in Slovakia, Slovenia, Poland, Greece and the Baltic States — where it was only around EUR 10 per head).

In the Cohesion countries (the new Member States, Greece, Spain and Portugal), in general, therefore, the level of aid is well below the EU. In particular, the new Member States, apart from Malta and Cyprus, have rates of aid which are almost two-third less than the EU average (EUR 36 in 2005 as against EUR 98)

5 State aid action plan: Less and better targeted state aid: a roadmap for state aid reform 2005–2009, COM(2005) 107.

6 Total of aid, with the exception of aid to agriculture, fishery and transport.

and which moreover are tending to decline markedly (halving since).

Aid to lagging regions

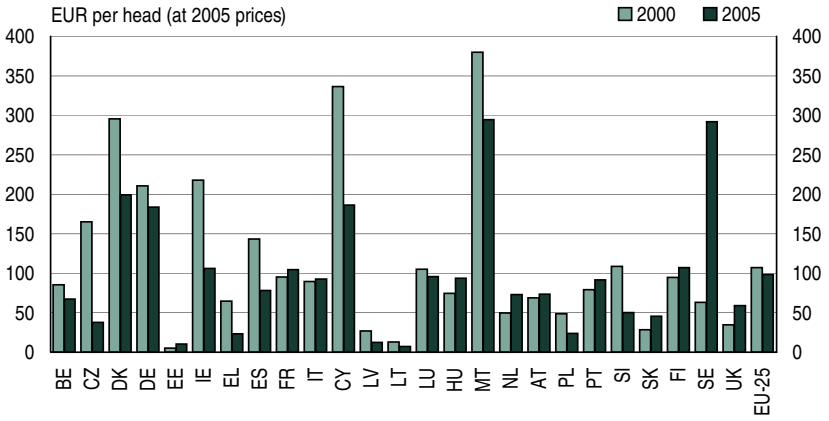
Aid to lagging regions (eligible under Article 87.3 a of the Treaty) amounted to slightly over EUR 11 billion in 2005 as against EUR 16 billion in 2000 and EUR 19 billion in 2003. This reduction is mainly a result of the accession of the new Member States, in which transitional aid schemes came to an end. Accordingly, the reduction in aid to eligible regions has tended to decline more than the overall aid since 2000.

In all 19 Member States have eligible regions, 7 of these (Malta, Poland, Hungary, Slovenia and the Baltic States) are entirely eligible. In these 19 countries, there are significant differences between the intensity of aid to eligible regions and that to the country as a whole.

On average, aid received by people living in the eligible regions was EUR 73 per head in 2005 as against EUR 95 per head in the Member States as a whole. In countries only partially eligible for regional aid under Article 87.3 a, this latter figure rises to EUR 104 per head (Fig. 4.3).

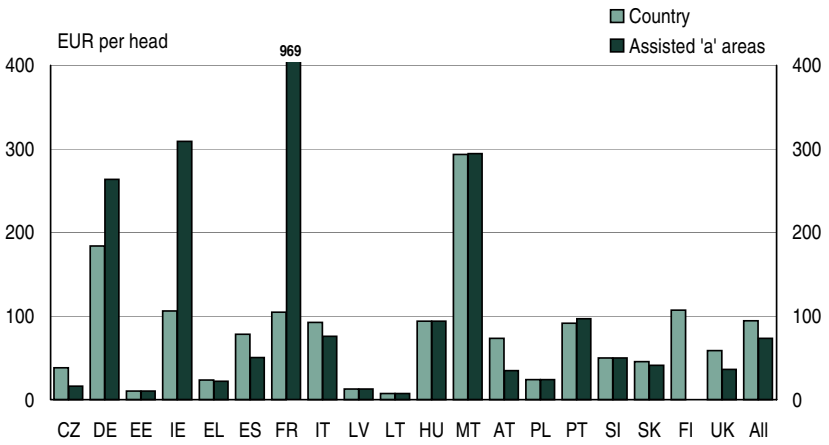
This difference is evident in the UK, Austria, Italy, Spain, Slovakia and the Czech Republic, in the two last, reflecting the concentration of investment, including from abroad, in the capital city regions of Prague and Bratislava.

4.2 State aid (excluding agriculture, fisheries and transport), 2000 and 2005



Source: European Commission

4.3 Intensity of State aid, 2005



Source: European Commission

It seems from this, therefore, that the Member States redistribute public resources by this means towards the most developed, and prosperous, regions, which tends to counteract Cohesion policy support which is concentrated in the less developed regions, so potentially slowing down any tendency towards internal convergence.

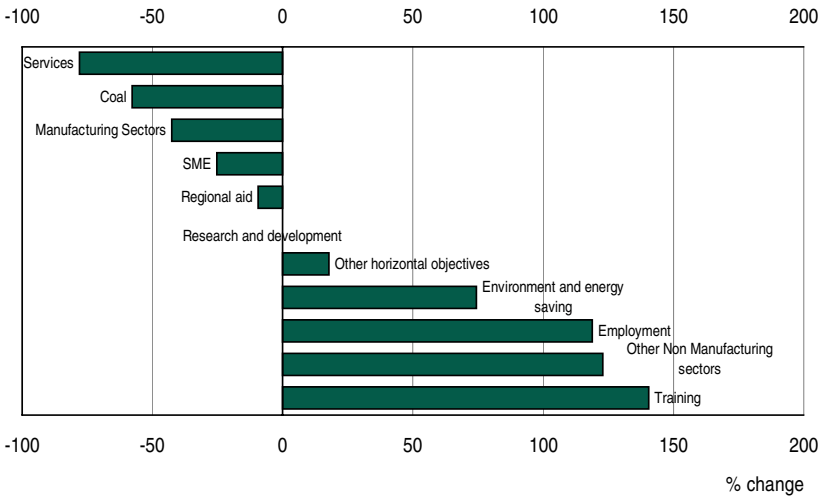
Directing aid towards the Lisbon objectives

In recent years, there has been a significant change in the distribution of State aid. Over half of Member

States concentrated over 90% of their aid on horizontal objectives[7].

In these countries, the aid directed towards the Lisbon and Gothenburg objectives (environment, regional aid, SMEs, employment, training and R&D) amounted to 80% of the total in 2005 (excluding fisheries, agriculture and transport) as compared with only 61% four years earlier. This increase is mainly the result of aid going to the environment and energy saving (up by 74%), training (by 140%) and employment (119%), while aid to SMEs fell (by 25%) and that to R&D remained unchanged. In four countries (Austria, Czech Republic, Finland and Luxemburg), however, over a quarter of aid went to the last (Fig. 4.4).

4.4 Change in the composition of State aid, 2000-2005



Source: European Commission

Among the Member States which continue to direct a significant share of State aid towards sectors, in Malta, 97% goes to manufacturing, in Hungary, 48% and in Cyprus and Slovakia, 38%, while in Portugal, almost three-quarters goes to financial services. In Spain and Poland, coal mining continues to be subsidised, despite a significant reduction since 2001, with, respectively, 34% and 24% of total aid going to this sector.

2007–2013: regional aid more coherent with Cohesion policy

The reform of regional aid has three objectives:

- to continue the process of reducing the intensity of aid;
- to concentrate 'intervention on the least favoured regions;
- to ensure the competitiveness of all regions in the EU.

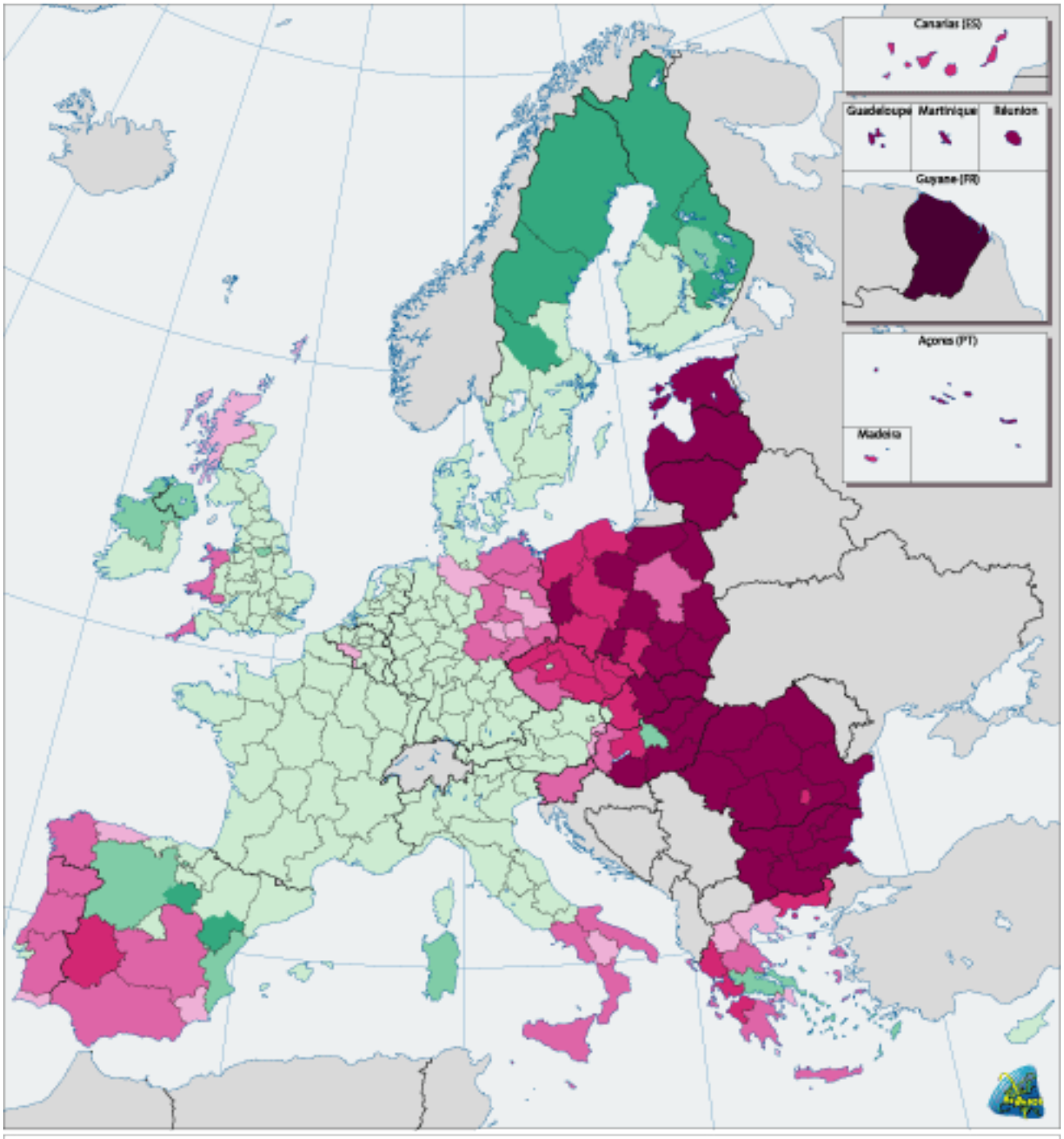
This reform ensures some continuity with the present situation in order to maintain coherence. To this end, there is a safeguard to make sure that the population covered in Member States does not decline by more than 50% in relation to the previous guidelines (Map 4.2).

In total, 42% of population in the Union will be covered, 31% under Article 87.3 (a), as against 52% and 34%, respectively in 2000–2006. Accordingly, the population covered in assisted regions has become significantly less than the population in non-assisted regions. Coverage is determined as follows:

- Eligibility to Article 87.3 (a) for regions where GDP per head in PPS terms is less than 75% of the EU average together with the outermost regions, with the possibility of providing aid of between 30% and 50% of investment, depending on their level of development (increased by 10 to 20% for SMEs).
- Eligibility of some regions[8] under Article 87.3 (c), with a coverage of population of between 2.8% (in

7 Employment, regional aid, SMEs, training, the environment, energy saving, R&D, trade, cultural activities, historical heritage, prevention of natural disasters and risk capital

8 Economic development regions, sparsely populated regions, regions bordering regions eligible under 87.3 (a) or on the external borders, regions with GDP per head below the EU-25 average or unemployment rate above 115% of the national average, islands and sparsely populated regions or regions with a very high unemployment rate, and regions with more than 50,000 inhabitants experiencing serious structural decline.



4.2 Regional State aid, 2007-2013

Art 87.3.a

- 60% Aid intensity
- 50% Aid intensity
- 40% Aid intensity
- 30% Aid intensity
- 30% - 20% (statistical effect)

Art 87.3.c

- 15% (low population)
- Economic development

- Other regions

15%-10% Aid intensity for an extra 7.5 % of the EU 25 population.
To be allocated by Member States + transitional provisions.
Map based on regional data available end 2005

0 500 Km

Portugal) and 33% (in Finland) and reaching 50% in countries where the population is entirely covered by the safety net (Ireland and Cyprus). The intensity of aid, therefore, reaches 10%, or even 15% (where GDP per head is below the EU average or unemployment is above the national average), with the same additional amounts for SMEs.

- Transitional eligibility of regions covered by the 'statistical effect' under Article 87.3 (a) up to 2010.

- The exceptional possibility of operating aid for regions eligible for assistance under Article 87.3 (a), outermost regions with low population density and the sparsely populated regions. This aid has to be temporary and to diminish over time except for outermost regions and the sparsely populated regions.

- Aid for business creation and start-up.

This new system gives Member States more flexibility in concentrating their aid through an integrated regional development strategy, aimed at clearly defined objectives and closely in line with the principles of the new Cohesion policy programming period.

In some of the regions eligible for the 'regional competitiveness and employment' objective, particularly in those where there is the risk of economic decline due to a lack of competitiveness, the guidelines enable better complementarity to be achieved between national policies for development and action under Cohesion policy .

Coherence between the two sets of policies is reinforced by their redirection towards priority services under the Lisbon agenda. The adoption of a new aid framework geared towards research and innovation should facilitate public investment in this area, while new guidelines on capital investment[9] should further development.

In addition, these guidelines by allowing operating aid, together with the clarification of the applicability of aid for Services of General Economic Interest, should enable public authorities to tackle the problems in some regions, caused by a lack of accessibility and inadequate transport networks, through resorting to their public service obligations and the associated financial compensation.

It is up to Member States to take advantage of the flexibility provided by the new State aid framework by, according to the context, aiming at:

- an appropriate concentration of intervention in less favoured regions or those which are a most risk of economic decline because of globalisation or economic restructuring;

- suitable coordination with the priorities identified under Cohesion policy or with national development priorities;

- optimising the aid possibilities under either the regional aid guidelines or the horizontal framework also available.

Agricultural policy and rural development

Market expenditure and direct aids

In 2005, budgetary expenditure on market policies and direct aids under the Common Agricultural Policy (CAP) amounted to EUR 42.1 billion (EUR 33.7 billion for direct aids and EUR 8.4 billion for market measures)[10], or 0.4% of the Gross National Income (GNI) of the EU-25. This represented a reduction from 40.4% of total EU spending in 2003 to 36.5%.

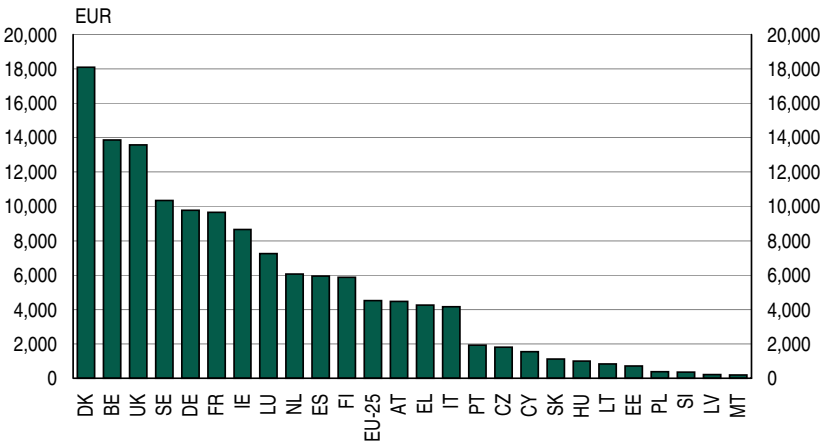
The principal beneficiaries in absolute terms of this component of the CAP in 2005 were France (21.6%), Spain (13.9%), Germany (13.5%) and Italy (11.4%). However, market expenditure and direct aids per unit of production[11] is significantly higher in the northern Member States than in the southern and new Mem-

9 Community guidelines on State aid to promote risk capital investments in small and medium-sized enterprises, 2006/ C 194/02

10 35th Financial Report on the European Agricultural Guidance and Guarantee Fund, Guarantee Section, 2005 Financial Year, COM(2006) 512 final: http://ec.europa.eu/agriculture/fin/index_en.htm

11 Annual work unit (AWU).

4.5 EAGGF-Guarantee expenditure (excl. rural development) by Annual Working Unit (AWU), 2005



AWU equal to 280 annual working days

Source: Eurostat

ber States. In the new Member States, direct payments are gradually being phased in and have not yet reached the level in the EU-15 (Fig. 4.5).

A recent study on the territorial impact of the CAP came to the conclusion that market policy support tends to benefit the more developed rural areas with large farms and lower unemployment rates as well as higher than average population growth. These areas tend to be concentrated more in the core regions in northern and western Europe and less in the peripheral regions in the east and south (Map 4.3).

This is not too surprising a result given that market support was not designed for cohesion purposes. Since 1992 however, reform of the CAP has increased its effects on cohesion by shifting support away from maintaining prices towards direct payments, which, in contrast to price support, tend to be higher in areas with a low GDP per capita and high unemployment rates.

Rural development

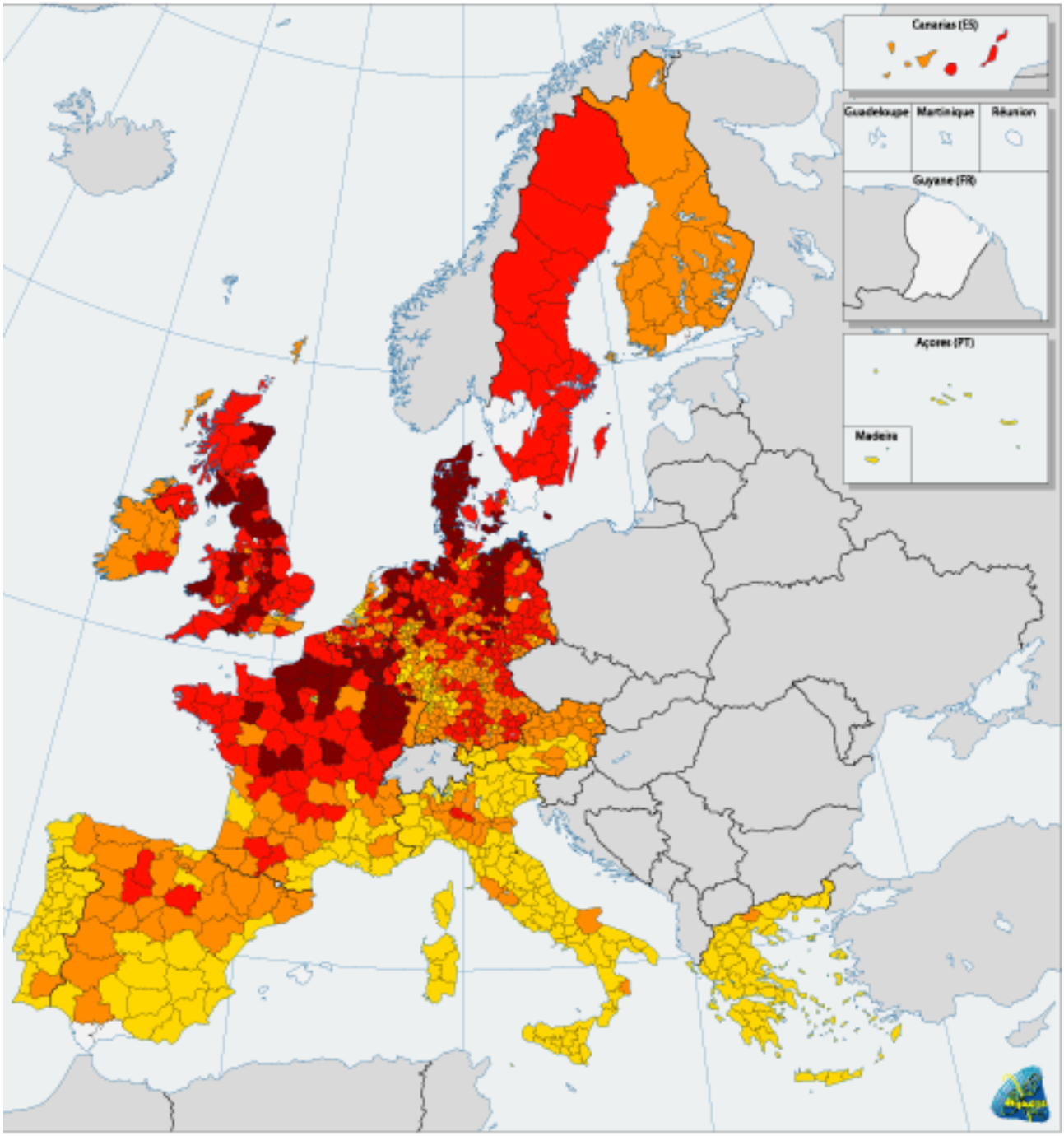
During the period 2000–2006, rural development programmes were financed under the CAP by both the EAGGF-Guidance and the EAGGF-Guarantee funds, the former applying in Objective 1 regions, the latter elsewhere. The EAGGF-Guarantee also financed the so-called rural development accompanying measures (eg for agri-environment, pre-retirement, farmland afforestation and less favoured areas,) in all regions. Over this period, expenditure from rural development funds on measures aimed at rural development outside agriculture[12] were both limited and concentrated in a few Member States (Germany and Spain, in particular). Indeed, over the period 2000–2005, only around 10% of the total expenditure of the EAGGF Guarantee Fund for the EU-15 went on this type of measure.

For the programming period 2007–2013, rural development will be implemented through one fund, the European Agricultural Fund for Rural development (EAFRD). At the same time, the policy aims have been simplified and clarified around three clearly defined economic (Axis 1), environmental (Axis 2) and territorial (Axis 3) objectives. In addition, the Leader method, a bottom up approach which has improved rural development through local action groups (almost 1000 across Europe) implementing strategies for their own areas will be mainstreamed.

A budget of some EUR 88.3 billion has been allocated to the EARDF for 2007–2013, with at least EUR 48.2 billion of this going to the Convergence regions[13]. The overall budget is EUR 20 billion less than the

12 Those implemented under 'Article 33 of the rules governing the operation of EAGGF as regards 'Promoting the adaptation and development of rural areas (Regulation 1257/1999).

13 Information based on Rural Development Programme proposals by the Member States. If not yet available, the minimum amounts earmarked for Convergence regions have been withheld (Commission Decision 2006/636).



4.3 Agricultural support under Pillar I, 1999

1000 Euros 1999 / AWU

- < 10
- 10 - 25
- 25 - 40
- >= 40
- no data

Source: ESPON project 2.1.3.
estimates

0 500 Km

Commission had initially proposed. However, most of the new Member States have received an increase in their annual allocation compared to the previous programming period, while some EU-15 countries have experienced a significant reduction. Support in the Convergence regions for the period 2007–2013 will average some EUR 40 per head and per year, substantially higher than in other regions (i.e. the Regional competitiveness and employment ones) where the average will be EUR 18 per head and per year.

For the same period, the share of the CAP budget devoted to rural development will increase as a result of the modulation scheme (the progressive reduction in direct payments to producers in favour of rural development). EARDF support for rural development outside the agricultural sector will also increase since interventions to improve the quality of life and diversify economic activity in rural areas (the third priority of the EARDF) will amount to 19% of the total budget (as against a minimum of 10% set by the Council). Depending on national strategies, however, it may turn out that some countries or regions will devote a significant share of their budget to this. In the Netherlands, it is intended to devote 35%, in Romania, Bulgaria and Malta, around 30%, in Poland, 25%, while among regions, the figure is 43% in Saarland.

In most Member States of the EU-27, the agricultural sector no longer constitutes the dominant part of the rural economy. In 2004, employment in the sector averaged 7.4% of the total in the EU-27, but with considerable variations between countries ranging from around 4.0% or less in most Member States to over 10% in Poland, Lithuania, Latvia, Greece, Portugal and Bulgaria and over 30% in Romania. Between 2000 and 2005, the share of agriculture fell 7.8% to 6.2% (according to the EU Labour Force Survey). This fall is likely to continue with the new Member States experiencing the same process of decline as in the EU-15 in the past. According to the mid-term evaluation[14], the impact of measures co-financed by the EARDF is more effective in maintaining employment rather than in creating jobs and has more effect in agriculture than in other parts of the economy (Table 4.1).

4.1 Employment and gross value added (GVA) in agriculture, 2004

	Employment as % of total	GVA as % of GDP
Belgium	2.2	0.9
Denmark	3.3	1.7
Germany	2.4	0.9
Ireland	6.4	1.8
Greece	12,6	5.2
Spain	5.5	3.4
France	4.0	1.9
Italy	4.2	2.2
Luxembourg	2.1	0.5
Netherland	3.2	1.7
Austria	5.0	1.2
Portugal	12.1	2.4
Finland	5.0	1.0
Sweden	2.5	0.6
UK	1.3	0.7
EU-15	**3.8**	**2.0**
Czeck Rep.	4.4	1.4
Estonia	5.5	2.2
Cyprus	5.1	2.5
Latvia	13.3	2.6
Lithuania	16.3	2.9
Hungary	5.3	3.1
Malta	2.3	1.3
Poland	17.6	3.1
Slovenia	9.7	1.9
Slovakia	5.1	2.0
NMS10	**12.5**	**4.5**
EU-25	**5.0**	**2.1**
Bulgaria	10.7	8.2
Romania	32.6	12.2
EU-27	**7.4**	**2.2**

Source: Eurostat

The challenge is, therefore, to support the overall competitiveness of rural economies by encouraging diversification and training outside agriculture and, at the same time, to help bring about changes in agriculture to respond to the objectives identified in the Community strategy such as support for innovation, the growth of bio-energy, improvement in product quality and in environmental conditions.

14 Synthesis of the mid-term evaluation of the rural development programmes 2000–2006.

Policies contributing to more and better jobs

Employment policy: achieving social objectives and ensuring equal opportunities

In addition to the measures supported by cohesion policy, there are a number of additional Community policies in relation to employment, social affairs and equal opportunities which contribute to economic and social cohesion.

- Combating discrimination, and promoting gender equality and equal opportunities which is one of the main policy priorities of the EU and part of its wider strategic objectives.

  The Roadmap for equality between women and men (2006–2010)[15] adopted in March 2006 was designed to drive the gender equality agenda forward by promoting the integration of the gender perspective in policy initiatives and measures at European, national, regional and local level (gender mainstreaming) as well as specific action to reduce inequalities between women and men.

  In addition, as part of the Lisbon strategy, the European Council has adopted a European Pact[16] for encouraging action at Member State and EU level to close gender gaps and combat gender stereotyping in the labour market, to bring about a better work-life balance for everyone and to strengthen governance through gender mainstreaming and better monitoring.

  Moreover, the regulations for the new European Institute for gender equality, which will provide technical support to Member States and the EU institutions to improve the implementation of Community policy, were agreed by the Council in December 2006.

- Supporting people with disabilities, who represent around 16% of EU population of working age and of whom only 40% are in employment.

  In order to achieve the employment targets set out in the revised Lisbon agenda, it is evident that vulnerable groups such as these need to be better integrated into the labour market. To help bring this about, the Council has established a clear line[17] to be followed by Member States and the Commission, calling for increased mainstreaming of a disability perspective in all relevant policies when they are formulated and implemented as well as when they are monitored and assessed.

  In addition, the EU Disability Action Plan has been launched for the period 2004–2010 with three objectives: the full implementation of the Employment Equality Directive; successful mainstreaming of disability issues in relevant Community policies; and improved accessibility for all.

- Combining labour market flexibility with security for workers, which is key for adaptation to change while ensuring social justice.

  The Commission initiated a public debate in November 2006 by publishing a Green Paper on *Modernising labour law to meet the challenges of the 21st century*, which asked Member States, employers and workers' representatives and people in general, how the EU and national legislation in this area could be adapted in response to the challenges of the global economy and the new realities of work organisation. A follow-up communication summarising the results and identifying areas for change is planned in 2007.

- Ensuring free movement of workers, which is a fundamental aspect of the internal market and important for increasing convergence between Member States and regions, as well as being one of the fundamental freedoms guaranteed by Community law as set out in Article 39 of the Treaty .

  The right to free movement for workers is complemented by a system for coordinating social security arrangements and by an agreed set of rule for resolving practical cross-border problems in this

15 COM(2006)92 final

16 Annex II Presidency conclusions — 23/24 March 2006

17 Council Resolution of 15 July 2003 on promoting the employment and social integration of people with disabilities

area. In 2003, the scope of these provisions was extended to third-country nationals living legally in the EU (under Regulation 859/03) and efforts are at present being made to simplify the rules in place.

In addition, in April 2006 guidance was published to help Member State governments, businesses and workers understand their rights and obligations when companies post employees to work in another EU country and to clarify EU legal requirements in this respect. A follow-up report is planned in 2007.

- Maintaining effective social inclusion policies and modern social protection systems, which meet the needs of people and are financially sustainable in the long term.

  Such systems are crucial for achieving the Lisbon goals of economic growth, more and better jobs and greater social cohesion. Co-ordination at the EU level, combined with the setting of common objectives, helps Member States to develop and adapt their policies, monitor the outcomes and exchange good practice. The policy areas concerned include inclusive labour markets, active ageing, lifelong learning and equal opportunities.

- Responding to demographic change, which in the form of ageing and migration is increasingly affecting the structure and spatial distribution of the labour force in the EU. A Green Paper[18] describes the current situation and the expected trends as well as suggestions on the action to be taken, which given the very different demographic characteristics of regions, can have a significant effect on social and economic cohesion.

Education and culture policy for investing in human capital

Education policy, and the associated investment in human capital to improve skills and qualifications, directly affects on the possibilities for regional convergence as well as social cohesion. Equal access to knowledge and learning needs to be ensured throughout the EU to avoid differences in systems of education and training reinforcing economic disparities between regions.

The objective of supporting EU cohesion objectives through education and training policy is pursued through the *Education & Training 2010* work programme[19] which is aimed, among other things, at adding a European dimension to education, aligning school education policies, furthering the mutual recognition of diplomas, encouraging life-long learning and promoting excellence in higher education.

Coordination measures targeted, for example, at improving core skills and competencies, early school leaving and completion of upper-secondary education, support the employment goals pursued in under Cohesion policy and can help to increase access to jobs and social inclusion in deprived regions. Equally, EU programmes for enhancing cooperation in vocational education and training and adult education (under the so-called Copenhagen process) should also contribute to strengthening regional competitiveness and increasing employment. In addition, student exchange schemes, which are particularly important in disadvantaged regions[20], can increase the mobility of young people and reduce the disadvantage of living in regions with less well developed educational facilities.

Moreover, programmes encouraging trans-national co-operation between universities can also contribute to reducing regional disparities in tertiary education in terms of both teaching and research capacities. As part of the wider agenda on education reform (under the Bologna process), European universities are also encouraged to play a larger role in the Lisbon strategy by mobilising their potential for boosting economic growth and job creation.

18 COM (2005) 94, 16.03.2005

19 'Modernising education and training: a vital contribution to prosperity and social cohesion in Europe'. 2006 joint interim report of the Council and the Commission on progress under the 'Education & Training 2010' work programme (February 2006).

20 In 2004/2005, 32% of Erasmus students came from Cohesion countries (source: national agency final reports).

In a slightly different area, the designation of cities as European capitals of Culture can create significant opportunities for their development both in the city itself and in surrounding areas.

Health policy for a healthier population

The overall aim of health policy at EU level is to ensure a high standard of health care and to encourage cooperation between Member States in this regard. Policy is directed towards health and safety at work and improving public health, through, for example, information and education (awareness-raising) and preventing illness and disease.

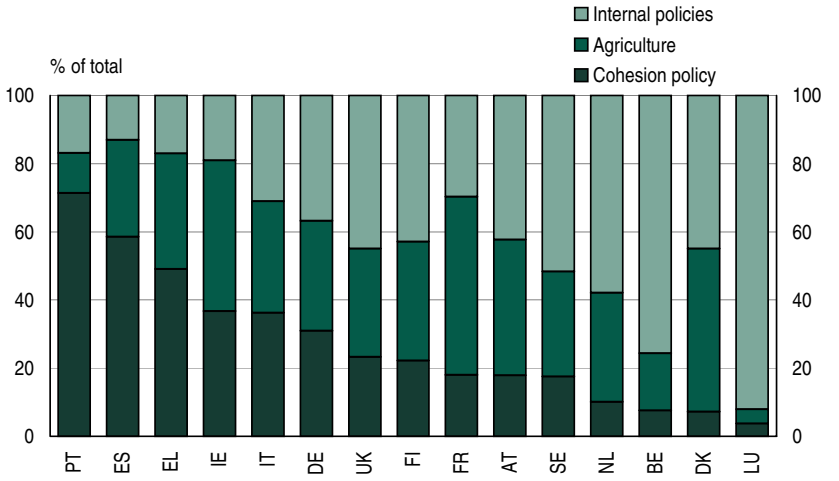
The ultimate goal of health and safety at work is to improve working conditions in EU Member States and to reduce the incidence of work-related accidents and illnesses which both result in absenteeism and can lead to permanent occupational disability. The application of Community legislation in this area can have an important effect on the productivity of enterprises and the competitiveness of regions and Member States and consequently on economic growth and employment.

In combination with regional policy, health policy can help to make for a healthy population and so increase participation in both employment and society generally. This is especially important in lagging regions which tend to be more disadvantaged in terms of both the health and age structure of the population.

The EU budget

Each policy financed by the Community budget has its own objectives, whether it is to assist the restructuring of a particular sector, promote critical mass and excellence in certain areas or support investment which because of its trans-national dimension requires a Community response.

4.6 Community budget: allocation of resources by policy area and Member State (average 1995-2005)



Source: European Commission, Allocation of 2005 EU expenditure by Member State, September 2006

While only Cohesion policy explicitly has a redistributive function, all expenditure implicitly has a redistributive effect. Since Article 159 of the Treaty requires that the formulation and implementation of Community policies and actions should take account of economic and social cohesion, it is important to understand the overall effect of the Community Budget in each Member State (Fig. 4.6).

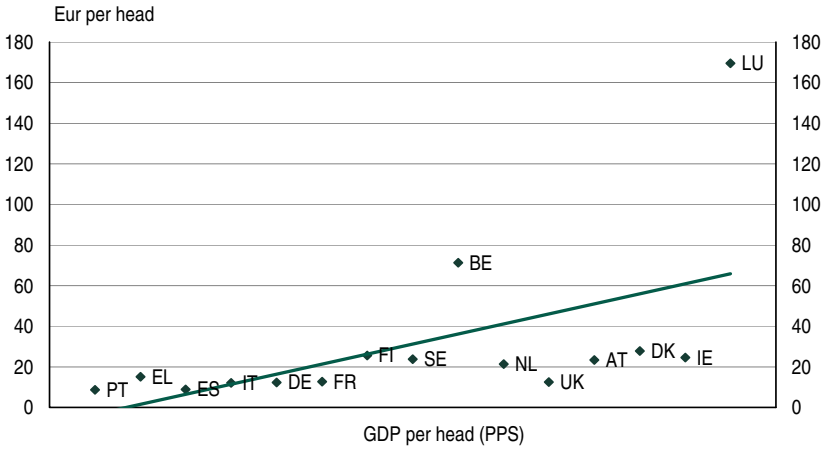
Because data on actual expenditure is available only up to 2005[21], the following does not include the new Member States which joined the Union in May 2004 and at the beginning of 2007 for which 2005 data are not meaningful.

Expenditure aimed at promoting excellence and overcoming the fragmentation of activities in certain areas (such as R&D) is not linked to the relative prosperity of Member States and therefore its distribution between them is not correlated with GDP (Fig. 4.7).

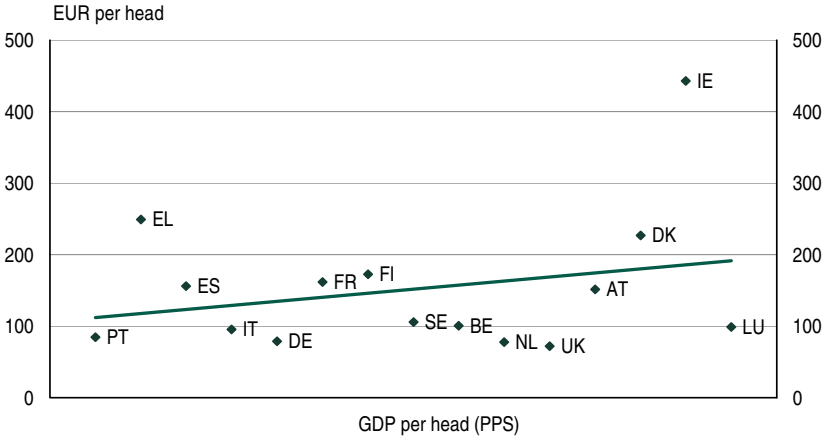
Similarly, policies for supporting the restructuring of agriculture also do not show any correlation with national wealth, since most of the expenditure is related to the structure of agricultural holdings and to

21 Commission's document: "Allocation of 2005 EU expenditure by Member State, September 2006, available on http://ec.europa.eu/budget/documents/revenue_expenditure_en.htm.

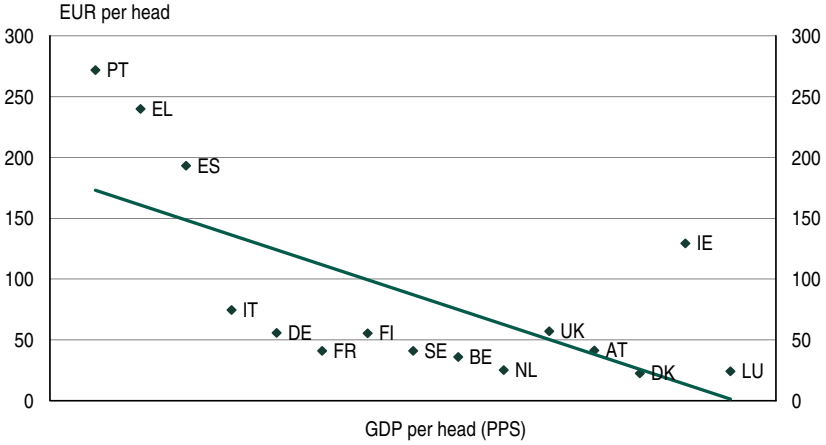
4.7 Community budget: distribution of resources on internal policies between countries, 2005



4.8 Community budget: distribution of resources on agriculture between countries, 2005



4.9 Community budget: distribution of resources on cohesion policy between countries, 2005



Source: European Commission, Allocation of 2005 EU expenditure by Member State, September 2006

the gap between market prices and support prices (Fig. 4.8).

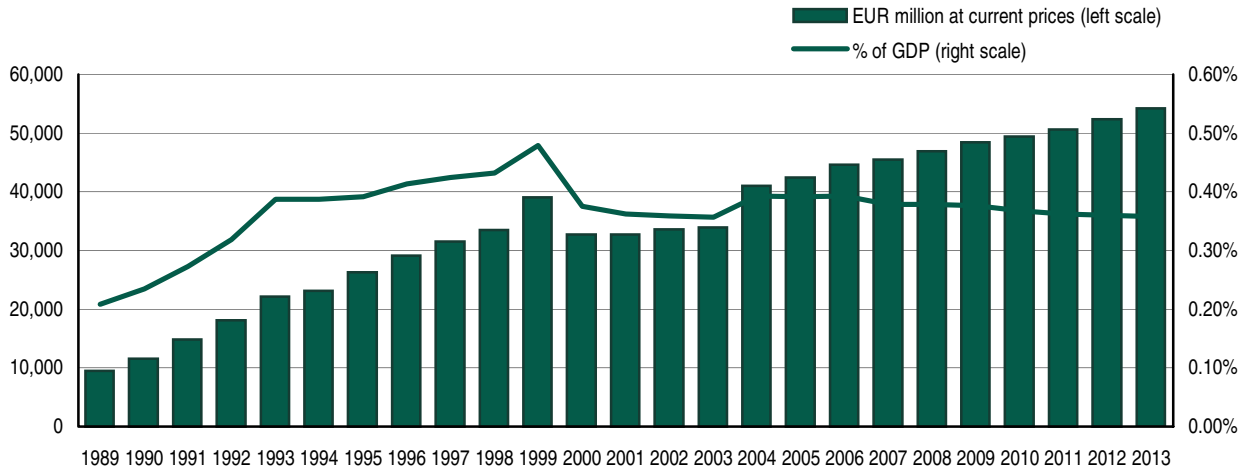
Not surprisingly, the distribution of resources between Member States under cohesion policy is strongly related to their GDP, since this is the main criterion on which resources are allocated (Fig. 4.9).

Cohesion policy has played an essential role in supporting the construction of the European Union by seeking to ensure that everyone benefited from the creation of the Single Market irrespective of where he or she lived or worked and was in turn able to contribute to economic activity. Equally, through the creation of the Cohesion Fund in the early 1990s, it helped the weaker Member States to fulfil the conditions for economic convergence and sound government finances in the run-up to the single currency.

In addition, cohesion policy has provided key support for structural adjustment in the countries entering the EU in successive phases of enlargement and it is now contributing to the pursuit of the Lisbon strategy.

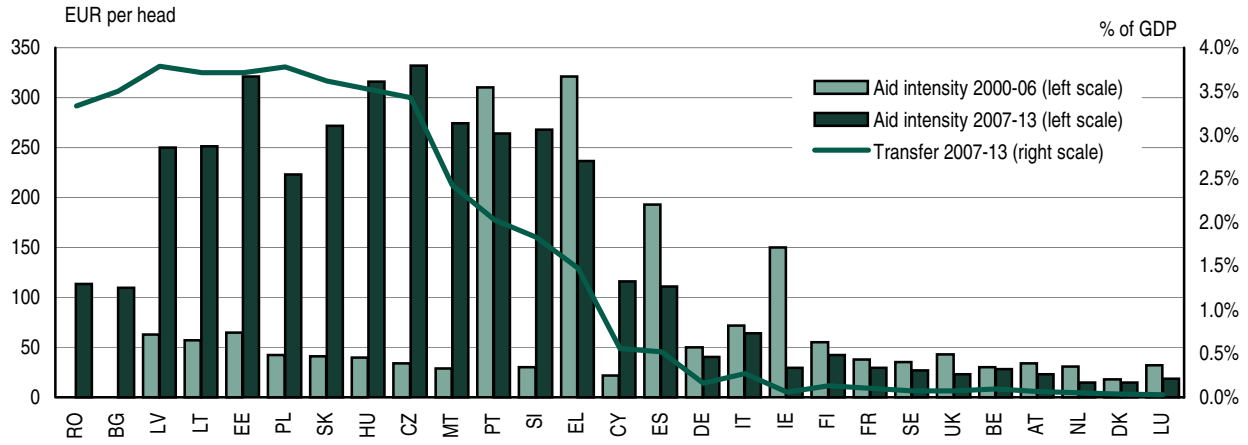
Cohesion policy now accounts for around a third of the total spending from the Community budget and will amount to some EUR 54.2 billion in 2013. Yet, despite the challenges posed by the two recent enlargements of the EU and the entry of 12 countries with GDP per head well below the average of the existing Member States, the size of the Funds is declining in relation to EU GDP. By 2013, it will

4.10 Cohesion policy spending, 1989-2013



Source: European Commission

4.11 Cohesion policy spending, 2000-2006 and 2007-2013



Source: calculations DG REGIO

have fallen to 0.35% of GDP back to what it was at the beginning of the 1990s (Fig. 4.10).

The allocation of the Funds to Member States and regions for the period 2007–2013 was decided by the European Council in December 2005 on the basis of objective statistics, using the so-called Berlin method established in 1999 during the preparation of Agenda 2000. Overall, the system ensures that the bulk of resources are concentrated on the less developed regions and countries. Whereas in 1989, 56% of available resources were allocated to the lowest income regions, at the end of the current programming period, the proportion will be 85%. The new Member States, which represent around 21% of the population of the EU-27, are set to receive just over 52% of the total over the period.

The method of distribution attempts to strike a balance between the need to relate the amount of financial support to the GDP per head of a region or country, so that those with the lowest levels receive most, and the need to ensure that available resources are used most effectively. Under the method adopted, each Member State is allocated an amount of aid per head which is larger the lower the GDP per head in its regions. This amount is then capped so that it cannot exceed a maximum level in relation to GDP (Fig. 4.11).

Once the allocation of resources between Member States has been decided, national governments are responsible for determining the distribution between national and regional programmes and between regions (except for the Cohesion Fund which is allocated nationally), taking account of the indicative allocations proposed by the Commission.

According to the National Strategic Reference Frameworks (NSRFs), regional programmes are planned at present to absorb around 50% of Structural Funds support under the Convergence objective and over 75% of support under the Regional competitiveness objective. Accordingly, over EUR 100 billion of the Structural Funds is planned to go not to regional programmes but to sectoral programmes designed and managed at the national level. The distribution between regional and national programmes, however, varies significantly between countries, with most of the new Member States, as well as Greece and Portugal, allocating the largest part of resources to national programmes.

In relation to the initial distribution of resources between regions indicated by the Commission, Member States, on average, have re-allocated around 6% of ERDF resources in respect of Convergence regions and 7% in respect of RCE regions away from the intended recipients to, in most cases, the most developed regions.

In addition, Member States and regions are responsible for determining the distribution of the Structural Funds between the ERDF and the ESF. For the period 2007–2013, on the basis of available data, Member States have chosen to assign, on average, approximately 75% of the Structural Funds allocation to the ERDF under the Convergence objective (the minimum being 63% in the UK), and around 54% under the Regional competitiveness objective (the minimum being 38% in Belgium).

Main regional indicators

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
EU27	**489671**	**116.0**	**0.3**	**100.0**	**100.0**	**2.3**	**6.2**	**27.7**	**66.1**	**1.8**	**1.2**	**63.3**	**55.9**	**42.2**
België/Belgique	**10417**	**343.5**	**0.3**	**124.4**	**140.1**	**2.2**	**2.0**	**24.7**	**73.3**	**1.9**	**1.3**	**61.1**	**53.8**	**31.8**
Région de Bruxelles-Cap. / Brussels Hfdst. Gew.	1003	6229.3	0.6	248.3	168.8	2.2	0.2	11.1	88.7	1.2	0.6	54.8	47.9	39.5
Vlaams Gewest	6027	451.0	0.3	123.2	140.0	2.3	2.0	27.6	70.3	2.1	1.5	64.9	57.9	30.5
Prov. Antwerpen	1672	598.9	0.3	144.5	153.1	2.0	1.7	28.4	69.9	:	:	63.5	55.4	29.9
Prov. Limburg (BE)	808	337.3	0.5	101.5	123.8	2.2	1.8	32.2	66.0	:	:	60.5	52.1	24.3
Prov. Oost-Vlaanderen	1376	467.2	0.2	111.0	134.4	2.4	2.0	28.4	69.6	:	:	66.8	60.5	31.3
Prov. Vlaams-Brabant	1034	492.6	0.4	130.1	154.1	3.0	1.3	19.4	79.3	:	:	67.5	61.7	36.2
Prov. West-Vlaanderen	1137	362.9	0.1	115.8	125.1	2.2	3.5	30.3	66.2	:	:	65.7	59.0	29.8
Région Wallonne	3387	201.6	0.2	90.0	123.6	1.8	2.6	22.6	74.8	2.0	1.5	56.1	48.4	32.1
Prov. Brabant Wallon	362	331.9	0.8	119.9	154.5	3.5	1.6	17.1	81.3	:	:	60.0	54.3	39.5
Prov. Hainaut	1284	340.4	-0.0	81.6	119.6	1.4	2.7	24.6	72.7	:	:	52.9	45.0	28.3
Prov. Liège	1031	268.2	0.2	92.3	121.6	1.3	2.0	23.2	74.8	:	:	56.1	48.6	32.8
Prov. Luxembourg (BE)	255	57.4	0.6	86.0	114.7	2.1	4.9	23.0	72.0	:	:	61.1	52.4	35.5
Prov. Namur	454	124.2	0.5	86.7	118.0	2.3	3.2	20.4	76.5	:	:	59.0	50.7	33.9
Bulgaria	**7781**	**70.1**	**-0.9**	**33.2**	**12.2**	**1.6**	**8.9**	**34.2**	**56.8**	**0.5**	**0.1**	**55.8**	**51.6**	**34.7**
Severna I Iztochna Bulgaria	4093	59.9	-1.1	27.9	10.7	2.1	:	:	:	:	:	:	:	:
Severozapaden	983	51.5	-1.6	25.6	9.9	1.4	:	:	:	:	:	:	:	:
Severen tsentralen	963	64.3	-1.3	26.4	9.9	2.0	:	:	:	:	:	:	:	:
Severoiztochen	1004	69.3	-0.5	29.3	11.3	2.7	:	:	:	:	:	:	:	:
Yugoiztochen	1143	57.7	-0.9	29.9	11.7	2.0	:	:	:	:	:	:	:	:
Yugozapadna I Yuzhna Centralna Bulgaria	3688	86.4	-0.6	39.0	13.7	4.0	:	:	:	:	:	:	:	:
Yugozapaden	2112	104.0	-0.3	49.1	16.5	4.9	4.0	32.1	63.9	1.0	0.2	61.5	57.8	39.0
Yuzhen tsentralen	1576	70.5	-1.0	25.6	9.6	1.9	:	:	:	:	:	:	:	:
Old statistical regions:														
Severna Bulgaria	2950	60.8	-1.2	27.1	10.4	2.1	10.3	33.8	55.9	0.2	0.1	55.8	51.6	34.7
Severozapaden	508	49.4	-2.2	27.1	10.3	1.7	7.3	34.0	58.7	0.0	0.0	47.0	44.9	27.7
Severen tsentralen	1160	63.5	-1.1	26.2	10.1	1.9	7.6	38.4	54.1	0.2	0.1	53.4	50.8	31.9
Severoiztochen	1282	64.2	-0.8	27.9	10.6	2.3	13.6	29.9	56.6	0.2	0.1	53.9	48.2	34.4
Yuzhna Bulgaria	4831	77.3	-0.7	36.9	13.3	3.1	8.2	34.5	57.3	0.7	0.1	57.7	53.4	36.5
Yugozapaden	2112	104.0	-0.3	49.1	16.5	4.4	4.0	32.1	63.9	1.0	0.2	61.5	57.8	39.0
Yuzhen tsentralen	1939	70.5	-1.0	27.1	10.1	1.2	11.9	37.8	50.3	0.2	0.1	54.7	50.5	33.5
Yugoiztochen	780	53.3	-0.9	28.3	11.5	2.5	12.2	33.7	54.0	0.1	0.1	54.2	48.1	36.9
Česká Republika	**10207**	**132.1**	**-0.1**	**75.2**	**35.7**	**2.2**	**4.0**	**39.5**	**56.5**	**1.3**	**0.8**	**64.8**	**56.3**	**44.5**
Praha	1167	2405.8	-0.4	157.1	55.1	3.8	0.6	20.1	79.3	2.0	0.9	71.3	64.5	58.5
Střední Čechy	1139	105.4	0.3	69.9	35.5	3.8	4.1	38.0	57.9	2.5	2.1	67.0	57.9	47.7
Jihozápad	1174	68.8	-0.1	69.6	32.5	2.0	5.8	43.6	50.6	0.7	0.4	67.8	58.9	45.9
Severozápad	1125	132.7	-0.1	60.7	30.9	0.3	2.7	41.2	56.1	0.2	0.2	61.5	53.2	43.7
Severovýchod	1479	120.7	-0.1	63.7	30.5	1.5	4.0	46.6	49.4	1.0	0.8	65.7	56.3	43.4
Jihovýchod	1639	119.4	-0.2	67.4	32.7	1.9	6.0	40.6	53.4	1.1	0.6	64.1	55.4	41.6
Střední Morava	1226	136.0	-0.2	59.8	30.1	1.3	4.9	43.2	51.9	0.7	0.6	62.1	52.8	39.6
Moravskoslezsko	1258	232.0	-0.3	61.1	33.4	1.2	3.1	42.6	54.3	0.8	0.6	59.3	51.7	35.5
Danmark	**5403**	**125.4**	**0.4**	**124.5**	**144.5**	**2.0**	**3.2**	**23.9**	**72.9**	**2.6**	**1.8**	**75.9**	**71.9**	**59.5**
Deutschland	**82501**	**231.1**	**0.1**	**115.8**	**114.7**	**1.4**	**2.4**	**29.8**	**67.8**	**2.5**	**1.8**	**65.4**	**59.5**	**45.4**

Labour market				Age structure			Education				
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High	Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
9.0	**9.8**	**18.8**	**46.0**	**16.3**	**67.3**	**16.4**	**29.1**	**48.6**	**22.4**	**0.51**	**EU27**
8.4	**9.5**	**21.5**	**51.7**	**17.3**	**65.6**	**17.1**	**33.9**	**35.0**	**31.0**	**0.59**	**België/Belgique**
16.3	16.4	35.1	56.4	18.2	66.1	15.6	32.7	25.8	41.5	0.50	Région de Bruxelles-Cap./Brussels Hfdst. Gew.
5.4	6.3	14.2	41.6	16.6	65.8	17.6	32.7	36.7	30.6	0.66	Vlaams Gewest
6.2	7.3	11.8	44.0	16.8	65.7	17.5	33.2	37.2	29.6	0.65	Prov. Antwerpen
7.1	8.6	16.1	44.2	16.5	68.3	15.2	37.7	37.2	25.1	0.54	Prov. Limburg (BE)
4.9	5.5	16.6	37.1	16.4	65.8	17.8	33.1	36.7	30.1	0.68	Prov. Oost-Vlaanderen
4.4	4.7	16.1	45.0	17.0	65.7	17.3	25.7	34.6	39.6	0.74	Prov. Vlaams-Brabant
4.7	5.8	11.9	37.3	16.3	64.5	19.3	34.2	37.8	28.0	0.66	Prov. West-Vlaanderen
11.8	13.7	31.8	58.6	18.2	65.0	16.8	36.5	34.8	28.7	0.49	Région Wallonne
9.0	9.3	28.8	52.2	19.1	65.7	15.2	22.9	31.7	45.4	0.66	Prov. Brabant Wallon
14.0	17.0	36.6	62.6	18.0	65.0	17.0	41.4	35.4	23.2	0.40	Prov. Hainaut
11.9	12.6	28.0	57.0	17.7	65.0	17.3	36.6	33.7	29.6	0.49	Prov. Liège
7.9	10.0	23.7	47.0	19.9	64.0	16.1	36.8	35.9	27.3	0.57	Prov. Luxembourg (BE)
10.4	12.6	32.6	58.0	18.6	65.0	16.4	33.1	37.2	29.7	0.53	Prov. Namur
10.1	**9.8**	**22.3**	**59.8**	**14.2**	**68.7**	**17.1**	**27.5**	**50.9**	**21.6**	**0.26**	**Bulgaria**
11.2	11.3	24.7	:	:	:	:	:	:	:	:	Severna I Iztochna Bulgaria
12.1	13.6	24.8	:	:	:	:	:	:	:	:	Severozapaden
12.1	13.6	24.8	:	:	:	:	:	:	:	:	Severen tsentralen
12.1	13.6	24.8	:	:	:	:	:	:	:	:	Severoiztochen
8.3	8.7	19.3	:	:	:	:	:	:	:	:	Yugoiztochen
8.9	8.4	20.2	:	:	:	:	:	:	:	:	Yugozapadna I Yuzhna Centralna Bulgaria
7.6	7.0	14.7	57.6	13.2	70.5	16.3	16.6	51.8	31.5	0.45	Yugozapaden
11.0	10.4	28.8	:	:	:	:	:	:	:	:	Yuzhen tsentralen
											Old statistical regions:
10.1	12.3	26.8	60.1	14.3	67.7	18.0	29.4	51.7	18.9	0.16	Severna Bulgaria
13.7	12.8	28.7	59.2	14.1	64.1	21.8	25.6	57.2	17.2	0.05	Severozapaden
10.8	9.7	25.1	62.4	13.3	67.3	19.4	25.1	54.4	20.5	0.18	Severen tsentralen
13.2	14.4	27.6	58.9	15.2	69.6	15.2	34.7	47.2	18.2	0.16	Severoiztochen
8.8	8.5	19.9	59.6	14.1	69.3	16.5	26.4	50.4	23.2	0.32	Yuzhna Bulgaria
7.6	7.0	14.7	57.6	13.2	70.5	16.3	16.6	51.8	31.5	0.45	Yugozapaden
10.0	9.4	26.9	64.7	14.5	68.7	16.9	34.4	49.5	16.1	0.16	Yuzhen tsentralen
9.6	10.6	19.5	51.1	15.8	68.1	16.2	33.8	48.5	17.7	0.21	Yugoiztochen
7.9	**9.8**	**19.2**	**53.0**	**15.2**	**70.8**	**13.9**	**10.1**	**76.9**	**13.1**	**0.57**	**Česká Republika**
3.5	4.0	9.2	41.3	12.7	71.5	15.8	4.5	68.4	27.1	0.82	Praha
5.2	6.9	11.1	42.1	15.3	70.6	14.2	10.2	79.3	10.5	0.67	Střední Čechy
5.1	6.6	12.4	43.9	15.2	70.7	14.1	10.1	79.1	10.8	0.59	Jihozápad
13.5	15.1	27.8	64.1	16.1	71.7	12.3	15.7	76.8	7.5	0.38	Severozápad
5.6	7.6	14.8	45.8	15.7	70.3	14.0	9.7	79.6	10.7	0.57	Severovýchod
7.7	9.3	19.9	50.3	15.3	70.3	14.4	9.6	76.1	14.3	0.53	Jihovýchod
9.7	12.5	22.4	48.8	15.4	70.6	14.0	9.9	77.7	12.4	0.48	Střední Morava
13.9	17.2	32.2	61.1	15.9	71.4	12.7	11.6	77.8	10.6	0.39	Moravskoslezsko
4.8	**5.3**	**8.6**	**23.4**	**18.9**	**66.2**	**14.9**	**17.3**	**49.1**	**33.5**	**0.83**	**Danmark**
11.2	**10.9**	**15.5**	**53.0**	**14.7**	**67.3**	**18.0**	**16.9**	**58.6**	**24.6**	**0.59**	**Deutschland**

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Baden-Württemberg	10703	299.4	0.4	130.4	120.8	1.5	2.0	38.4	59.6	3.9	3.1	70.0	63.1	52.1
Stuttgart	3998	378.7	0.4	141.0	126.0	1.5	1.9	40.2	57.9	4.7	4.2	70.1	62.7	52.3
Karlsruhe	2725	393.8	0.3	134.3	123.6	1.4	1.0	35.3	63.7	3.8	2.4	69.0	62.5	48.6
Freiburg	2182	233.1	0.5	114.6	110.8	1.6	2.4	37.6	60.0	2.2	1.4	71.0	65.0	55.1
Tübingen	1799	201.7	0.5	120.2	115.9	1.6	3.0	40.2	56.8	3.9	3.2	70.2	62.9	53.9
Bayern	12431	176.2	0.4	137.9	126.1	2.5	3.0	32.1	64.8	3.0	2.4	70.2	63.0	49.7
Oberbayern	4203	239.7	0.6	169.3	143.8	3.0	2.7	27.6	69.8	4.6	3.7	71.2	64.3	52.3
Niederbayern	1195	115.7	0.6	115.0	112.8	2.4	4.7	37.2	58.1	3.0	0.4	71.6	64.1	45.4
Oberpfalz	1090	112.5	0.4	119.3	113.8	2.4	3.5	35.0	61.5	3.0	1.9	70.3	62.5	49.0
Oberfranken	1108	153.2	0.0	113.0	110.7	1.1	2.2	37.0	60.8	1.3	1.0	68.4	62.4	45.5
Mittelfranken	1707	235.7	0.3	137.2	121.7	2.3	2.3	31.1	66.5	2.8	2.3	68.7	62.2	47.1
Unterfranken	1344	157.6	0.3	117.3	113.6	2.2	2.7	34.5	62.8	1.9	1.4	69.0	61.4	50.1
Schwaben	1784	178.5	0.4	122.0	118.7	2.0	3.7	34.5	61.8	1.3	1.2	70.0	61.5	50.7
Berlin	3388	3798.5	-0.3	101.2	103.9	-1.0	0.6	16.4	83.0	3.9	2.0	58.5	57.0	40.4
Brandenburg	2571	87.2	0.1	81.4	96.2	1.9	3.6	25.6	70.8	1.2	0.3	62.7	60.2	38.8
Brandenburg - Nordost	1165	75.2	0.2	76.2	96.4	2.0	4.1	25.0	70.9	0.6	0.2	61.7	59.3	37.7
Brandenburg - Südwest	1405	100.5	0.1	85.7	96.0	1.9	3.3	26.1	70.7	1.6	0.4	63.6	61.0	39.6
Bremen	663	1640.0	-0.3	155.8	126.0	1.3	0.8	25.2	74.1	2.7	1.4	59.2	54.5	43.4
Bremen	663	1640.0	-0.3	155.8	126.0	1.3	0.8	25.2	74.1	2.7	1.4	59.2	54.5	43.4
Hamburg	1734	2296.0	0.2	195.2	151.4	1.6	0.8	18.1	81.1	1.9	1.1	66.5	61.1	49.0
Hamburg	1734	2296.0	0.2	195.2	151.4	1.6	0.8	18.1	81.1	1.9	1.1	66.5	61.1	49.0
Hessen	6092	288.5	0.2	138.7	129.8	1.5	1.3	27.5	71.1	2.6	2.2	66.9	60.0	46.9
Darmstadt	3768	506.2	0.3	157.3	139.2	1.5	1.0	25.4	73.6	3.2	2.8	67.2	60.2	47.5
Gießen	1065	197.9	0.1	103.8	111.3	1.3	1.8	30.5	67.8	1.9	0.9	66.8	60.3	50.8
Kassel	1260	152.0	-0.1	112.7	112.7	1.4	2.2	31.6	66.2	0.8	0.6	65.9	59.1	42.0
Mecklenburg-Vorpommern	1726	74.5	-0.6	78.6	89.0	1.0	5.3	22.6	72.1	1.3	0.3	60.7	58.9	37.6
Niedersachsen	7996	167.9	0.4	100.2	105.4	1.0	3.6	28.2	68.2	2.9	2.1	64.4	57.8	45.4
Braunschweig	1660	205.0	-0.1	106.1	107.3	1.0	2.3	31.1	66.6	8.7	6.8	62.3	55.8	40.6
Hannover	2166	239.5	0.2	109.8	108.8	0.5	2.4	26.3	71.3	2.2	1.4	64.8	58.8	44.3
Lüneburg	1700	109.7	0.7	84.2	103.2	1.0	4.5	26.5	69.0	0.4	0.3	65.3	58.1	48.4
Weser-Ems	2468	164.9	0.6	98.9	102.3	1.5	4.9	29.3	65.8	0.6	0.3	64.8	57.9	47.5
Nordrhein-Westfalen	18074	530.3	0.1	115.0	115.0	0.9	1.6	29.9	68.5	1.8	1.1	63.3	56.4	42.9
Düsseldorf	5241	990.6	-0.1	129.2	124.7	1.0	1.7	28.1	70.2	1.5	1.1	63.0	56.4	42.6
Köln	4356	591.5	0.5	120.1	117.4	0.8	1.1	25.8	73.1	3.1	1.7	63.6	56.4	43.5
Münster	2625	380.0	0.3	95.7	103.1	0.9	2.5	31.6	65.9	0.9	0.5	63.1	56.1	42.1
Detmold	2072	317.8	0.4	109.1	107.0	0.9	1.9	35.3	62.7	1.2	0.9	66.6	60.4	47.1
Arnsberg	3781	472.5	-0.1	106.0	110.4	0.8	1.2	33.0	65.8	1.4	0.8	61.5	54.5	40.9
Rheinland-Pfalz	4059	204.5	0.3	102.3	108.7	1.1	2.6	30.4	67.0	1.8	1.3	66.9	59.7	47.6
Koblenz	1527	189.2	0.3	96.4	104.7	1.1	2.1	30.7	67.2	0.6	0.6	68.0	60.1	49.1
Trier	514	104.4	0.2	95.4	101.6	1.4	5.0	27.1	67.9	0.6	0.2	67.7	59.8	49.9
Rheinhessen-Pfalz	2018	294.5	0.2	108.4	113.4	1.0	2.4	31.0	66.6	2.8	2.0	66.0	59.5	45.9
Saarland	1059	412.2	-0.3	108.3	105.6	0.9	1.3	28.6	70.1	1.1	0.4	62.1	55.3	39.6
Saarland	1059	412.2	-0.3	108.3	105.6	0.9	1.3	28.6	70.1	1.1	0.4	62.1	55.3	39.6
Sachsen	4308	234.0	-0.7	85.9	90.3	1.6	2.6	31.2	66.2	2.2	1.0	62.8	60.7	40.4

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
7.1	7.3	11.1	45.0	16.0	66.9	17.1	19.1	54.9	26.0	0.75	Baden-Württemberg
7.6	7.7	10.8	45.3	16.1	67.1	16.9	20.0	53.5	26.5	0.77	Stuttgart
7.6	7.7	11.9	49.4	15.2	67.3	17.5	18.1	55.7	26.2	0.72	Karlsruhe
6.8	7.8	10.7	40.1	16.2	66.4	17.4	18.7	57.0	24.4	0.72	Freiburg
6.8	7.8	11.2	42.3	17.0	66.6	16.3	19.4	54.2	26.4	0.76	Tübingen
7.1	7.5	11.6	43.8	15.7	67.0	17.3	17.1	58.6	24.3	0.75	Bayern
5.8	6.3	10.4	40.7	15.3	68.2	16.5	15.8	53.7	30.5	0.84	Oberbayern
6.5	6.9	9.4	41.9	16.3	66.6	17.1	18.6	62.7	18.7	0.74	Niederbayern
6.5	6.9	10.2	48.6	16.2	66.6	17.2	17.3	63.5	19.2	0.72	Oberpfalz
10.3	11.1	16.4	48.8	15.2	65.7	19.1	17.3	63.7	19.1	0.60	Oberfranken
8.7	8.7	13.0	45.9	15.3	66.9	17.8	19.4	57.0	23.6	0.68	Mittelfranken
8.2	8.5	16.0	41.3	15.9	66.4	17.7	17.0	60.7	22.2	0.68	Unterfranken
6.5	7.3	9.4	43.4	16.7	66.0	17.3	17.0	61.7	21.2	0.70	Schwaben
19.4	17.1	23.8	58.5	12.4	71.6	16.0	16.6	48.8	34.6	0.45	Berlin
18.2	18.0	22.4	58.1	11.5	70.6	17.9	7.3	61.5	31.2	0.43	Brandenburg
19.9	19.2	25.4	59.8	11.5	70.9	17.7	8.0	61.7	30.3	0.35	Brandenburg - Nordost
16.8	16.9	20.0	56.4	11.6	70.4	18.0	6.8	61.3	31.9	0.48	Brandenburg - Südwest
16.6	15.2	19.3	59.3	13.5	67.0	19.5	25.8	52.7	21.5	0.42	Bremen
16.6	15.2	19.3	59.3	13.5	67.0	19.5	25.8	52.7	21.5	0.42	Bremen
10.5	9.3	14.9	47.3	13.2	69.2	17.6	19.1	55.5	25.4	0.61	Hamburg
10.5	9.3	14.9	47.3	13.2	69.2	17.6	19.1	55.5	25.4	0.61	Hamburg
8.5	8.5	13.0	50.1	15.0	67.3	17.7	18.1	55.6	26.3	0.66	Hessen
8.2	8.0	12.2	49.4	14.8	68.1	17.1	18.2	53.8	27.9	0.70	Darmstadt
9.0	9.0	16.1	47.7	15.6	66.7	17.7	18.2	56.6	25.2	0.63	Gießen
9.3	9.3	12.4	54.0	15.2	65.3	19.4	17.7	60.5	21.9	0.53	Kassel
21.4	21.0	20.9	62.9	11.5	70.7	17.8	8.6	64.7	26.7	0.36	Mecklenburg-Vorpommern
10.5	10.0	16.2	52.0	16.0	65.7	18.2	18.0	62.3	19.7	0.57	Niedersachsen
11.6	11.6	19.1	52.1	14.8	65.8	19.4	17.1	62.6	20.2	0.65	Braunschweig
10.5	9.6	16.7	55.8	15.0	65.8	19.2	17.9	59.0	23.1	0.56	Hannover
9.7	9.0	15.9	46.6	16.7	65.5	17.9	17.1	65.0	17.9	0.45	Lüneburg
10.2	9.9	14.2	51.9	17.4	65.7	16.9	19.2	63.2	17.6	0.50	Weser-Ems
10.5	9.7	15.7	52.5	15.6	66.1	18.2	20.5	58.5	21.0	0.53	Nordrhein-Westfalen
10.7	9.5	15.3	55.9	14.9	66.1	19.0	21.8	57.9	20.3	0.50	Düsseldorf
9.5	9.0	14.7	52.1	15.5	67.2	17.2	20.1	54.1	25.9	0.61	Köln
10.2	9.7	15.2	51.2	16.7	65.9	17.4	18.5	62.1	19.4	0.48	Münster
10.2	9.7	15.3	49.0	16.9	64.8	18.3	19.0	60.9	20.2	0.54	Detmold
8.8	9.0	17.6	51.1	15.4	65.8	18.8	21.4	61.0	17.6	0.48	Arnsberg
8.8	9.0	13.8	46.0	15.5	65.9	18.6	19.4	59.1	21.5	0.61	Rheinland-Pfalz
9.3	9.4	13.9	44.3	15.9	65.0	19.1	18.4	63.2	18.4	0.54	Koblenz
9.3	9.4	11.5	44.2	15.7	65.3	19.0	16.5	61.5	22.0	0.62	Trier
9.3	9.4	14.3	47.7	15.2	66.7	18.1	20.8	55.5	23.6	0.64	Rheinhessen-Pfalz
10.8	10.3	18.0	53.4	14.0	66.2	19.8	23.8	57.4	18.8	0.43	Saarland
10.8	10.3	18.0	53.4	14.0	66.2	19.8	23.8	57.4	18.8	0.43	Saarland
18.7	18.1	20.5	60.1	10.9	68.5	20.6	4.7	62.2	33.1	0.48	Sachsen

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Chemnitz	1560	256.0	-0.9	81.0	87.8	1.6	2.4	35.9	61.7	1.4	0.8	64.2	61.1	41.0
Dresden	1671	210.7	-0.6	90.4	93.7	2.1	2.9	30.3	66.7	3.1	1.5	62.8	60.6	41.0
Leipzig	1077	245.5	-0.4	85.9	88.3	0.7	2.3	25.7	72.1	1.9	0.6	60.9	60.3	38.4
Sachsen-Anhalt	2508	122.7	-1.0	81.3	94.6	1.5	3.2	27.6	69.2	1.1	0.3	60.4	57.3	37.3
Dessau	513	119.9	-1.3	75.8	93.9	1.0	3.7	30.3	66.0	0.6	0.5	60.7	58.3	33.9
Halle	829	187.2	-1.1	84.2	96.1	1.3	2.2	27.3	70.6	1.4	0.3	57.5	55.3	37.2
Magdeburg	1166	99.4	-0.9	81.7	93.8	1.9	3.6	26.7	69.7	1.2	0.2	62.4	58.2	39.0
Schleswig-Holstein	2825	179.2	0.4	104.1	111.8	1.0	4.1	21.9	73.9	1.1	0.5	66.4	60.3	48.2
Thüringen	2364	146.2	-0.7	81.4	88.7	2.1	2.8	32.9	64.3	1.8	1.0	62.4	59.0	41.8
Eesti	**1356**	**31.2**	**-0.7**	**55.7**	**31.9**	**6.8**	**5.3**	**34.0**	**60.7**	**0.9**	**0.3**	**64.5**	**62.1**	**56.0**
Éire/Ireland	**4059**	**59.4**	**1.3**	**141.4**	**159.4**	**7.6**	**5.9**	**27.6**	**66.5**	**1.2**	**0.8**	**67.7**	**58.3**	**51.6**
Border, Midland and Western	1084	33.8	1.4	100.1	121.9	7.7	9.4	31.1	59.5	0.9	0.6	66.1	55.4	52.3
Southern and Eastern	2976	82.0	1.3	156.5	174.1	8.2	4.7	26.4	68.9	1.3	0.8	68.2	59.4	51.3
Elláda	**11064**	**84.6**	**0.4**	**84.8**	**85.1**	**3.8**	**12.4**	**22.4**	**65.2**	**0.6**	**0.2**	**60.1**	**46.1**	**41.6**
Voreia Elláda	3550	63.2	0.4	65.4	69.5	3.6	17.9	23.9	58.2	0.5	0.1	58.2	43.9	40.9
Anatoliki Makedonia, Thraki	607	43.2	0.3	56.7	64.5	2.5	26.5	20.9	52.6	0.5	0.1	59.5	46.5	43.4
Kentriki Makedonia	1911	101.2	0.6	68.2	70.0	3.9	12.6	24.9	62.5	0.6	0.1	57.9	43.8	38.4
Dytiki Makedonia	295	31.9	0.1	62.7	75.0	3.4	16.9	32.0	51.1	0.1	0.0	52.0	37.0	33.5
Thessalia	738	52.7	-0.1	66.3	70.1	3.4	24.8	20.9	54.3	0.3	0.1	60.4	44.9	47.5
Kentriki Elláda	2450	46.0	0.2	69.1	74.3	3.0	23.1	21.0	55.9	0.4	0.0	59.7	44.0	45.4
Ipeiros	341	37.6	0.3	67.5	72.4	4.7	18.7	23.3	58.0	0.9	0.0	56.3	40.6	45.3
Ionia Nisia	220	95.6	0.9	76.7	85.5	4.6	17.5	14.7	67.8	0.1	0.0	64.0	50.6	49.8
Dytiki Elláda	731	66.3	0.3	54.5	61.4	1.9	23.2	19.0	57.8	0.9	0.1	56.6	39.8	42.9
Sterea Elláda	559	36.2	0.0	86.1	92.3	2.2	16.4	28.5	55.1	0.2	0.2	60.0	43.1	39.5
Peloponnisos	599	38.7	0.2	69.0	69.9	4.0	33.2	17.7	49.1	0.4	0.4	63.6	49.4	52.7
Attiki	3958	1039.8	0.6	112.7	102.6	4.0	0.6	23.2	76.2	0.7	0.3	61.4	48.8	38.0
Nisia Aigaiou, Kriti	1106	63.4	0.6	82.7	85.5	4.5	16.3	18.3	65.4	0.6	0.0	62.4	47.5	49.0
Voreio Aigaio	203	53.1	-0.0	60.6	67.9	5.1	17.5	16.5	65.9	0.2	0.0	56.8	38.6	41.5
Notio Aigaio	303	57.3	0.9	101.9	108.9	5.1	5.2	21.4	73.4	0.1	0.0	61.0	41.0	46.7
Kriti	601	72.1	0.6	80.5	79.8	4.0	21.2	17.2	61.6	1.0	0.0	64.9	53.6	52.9
España	**42692**	**84.4**	**0.9**	**100.7**	**91.7**	**3.7**	**5.3**	**29.7**	**65.0**	**1.1**	**0.6**	**63.3**	**51.2**	**43.1**
Noroeste	4317	94.9	-0.0	84.6	86.3	2.7	8.8	30.2	61.0	0.7	0.3	59.9	49.1	41.0
Galicia	2709	91.6	-0.0	81.0	83.9	2.7	10.7	30.3	59.0	0.9	0.3	61.1	51.0	43.2
Principado de Asturias	1060	99.9	-0.2	87.0	90.8	2.4	5.4	29.8	64.8	0.6	0.3	55.8	44.3	34.9
Cantabria	548	103.0	0.4	98.1	89.7	3.7	5.8	30.4	63.8	0.4	0.2	62.0	49.2	42.2
Noreste	4204	59.7	0.4	119.2	96.6	3.5	4.3	34.5	61.2	1.3	0.9	67.0	55.3	44.5
País Vasco	2099	290.1	0.1	125.4	102.6	3.5	1.6	33.7	64.7	1.5	1.2	65.5	54.5	41.7
Comunidad Foral de Navarra	577	55.5	0.9	126.7	94.5	4.0	5.0	36.7	58.4	1.8	1.2	69.1	58.3	48.0
La Rioja	291	57.8	1.1	109.4	88.9	3.7	8.0	40.3	51.8	0.7	0.4	69.1	55.5	51.9
Aragón	1236	25.9	0.4	107.4	89.0	3.2	7.5	33.5	59.0	0.7	0.4	68.2	55.2	46.1
Comunidad de Madrid	5763	717.9	1.5	132.1	102.5	4.2	1.0	23.7	75.2	1.6	0.9	68.5	59.6	48.6
Centro (ES)	5373	25.0	0.2	83.9	83.6	3.1	9.2	31.2	59.6	0.7	0.3	60.6	45.1	41.2
Castilla y León	2466	26.2	-0.2	94.9	89.9	2.7	8.5	31.3	60.2	0.9	0.5	62.7	48.6	43.6
Castilla-La Mancha	1840	23.2	0.9	79.1	78.9	3.6	8.1	34.4	57.5	0.4	0.2	61.4	43.5	40.8

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
17.8	18.2	16.3	62.6	10.7	67.6	21.7	3.4	65.4	31.2	0.46	Chemnitz
18.3	17.7	20.7	56.9	11.1	68.6	20.2	5.3	60.6	34.1	0.50	Dresden
20.5	18.5	25.4	61.4	10.8	69.7	19.6	5.6	60.2	34.2	0.44	Leipzig
20.4	20.3	23.4	62.0	11.0	69.3	19.7	10.5	63.9	25.7	0.38	Sachsen-Anhalt
21.3	20.8	23.3	64.5	10.5	69.1	20.4	14.7	63.6	21.7	0.29	Dessau
22.3	21.5	27.6	61.3	10.8	69.3	20.0	8.4	64.4	27.1	0.38	Halle
18.7	19.2	20.6	61.4	11.3	69.4	19.3	10.0	63.6	26.4	0.41	Magdeburg
10.3	9.4	15.4	49.4	15.7	66.0	18.4	15.1	64.0	20.9	0.55	Schleswig-Holstein
17.2	17.2	19.3	54.7	11.0	70.1	18.9	7.0	62.9	30.2	0.48	Thüringen
7.9	**7.1**	**15.9**	**53.5**	**16.0**	**67.8**	**16.2**	**10.9**	**55.8**	**33.3**	**0.54**	**Eesti**
4.3	**4.0**	**8.6**	**33.4**	**20.9**	**68.0**	**11.1**	**35.4**	**35.5**	**29.1**	**0.77**	**Éire/Ireland**
4.4	4.6	8.7	35.5	21.7	66.0	12.3	40.2	36.7	23.1	0.69	Border, Midland and Western
4.3	3.8	8.5	32.6	20.6	68.7	10.7	33.8	35.1	31.2	0.79	Southern and Eastern
9.8	**15.3**	**26.0**	**52.2**	**14.5**	**67.7**	**17.8**	**40.0**	**39.4**	**20.6**	**0.52**	**Elláda**
11.4	18.2	28.7	54.5	15.0	66.6	18.4	45.1	35.4	19.5	0.45	Voreia Elláda
11.8	17.8	31.4	57.8	15.0	65.6	19.4	51.5	33.1	15.4	0.41	Anatoliki Makedonia, Thraki
11.1	17.5	28.7	50.4	14.9	67.6	17.4	41.5	37.1	21.4	0.45	Kentriki Makedonia
18.0	28.0	44.1	67.9	15.3	64.9	19.8	49.7	32.8	17.5	0.29	Dytiki Makedonia
9.4	16.7	20.3	54.2	14.9	65.4	19.8	47.9	33.6	18.5	0.50	Thessalia
10.1	16.8	28.7	55.9	14.2	65.3	20.5	49.7	34.9	15.5	0.47	Kentriki Elláda
8.5	12.4	36.1	62.8	13.3	65.2	21.5	49.4	31.6	19.0	0.47	Ipeiros
8.5	12.4	23.3	25.2	14.3	64.9	20.8	57.2	30.6	12.2	0.54	Ionia Nisia
10.6	18.6	24.9	58.0	15.1	66.4	18.5	48.6	35.1	16.3	0.45	Dytiki Elláda
10.9	18.6	31.8	56.0	13.9	65.5	20.5	49.1	36.9	14.0	0.45	Sterea Elláda
8.7	14.1	28.2	59.4	13.8	63.9	22.3	48.9	36.1	15.0	0.51	Peloponnisos
8.8	12.5	23.1	50.4	13.8	70.4	15.8	28.6	46.0	25.3	0.57	Attiki
8.2	13.8	21.2	38.8	16.2	66.6	17.2	46.2	37.1	16.7	0.59	Nisia Aigaiou, Kriti
10.2	19.6	35.2	59.7	14.1	64.1	21.8	47.7	36.3	16.0	0.38	Voreio Aigaio
9.3	16.6	17.4	27.4	17.0	68.4	14.6	48.1	40.3	11.6	0.61	Notio Aigaio
7.1	11.2	17.7	37.5	16.5	66.5	17.0	44.8	35.6	19.6	0.65	Kriti
9.2	**12.2**	**19.7**	**24.5**	**14.5**	**68.6**	**16.9**	**51.2**	**20.6**	**28.2**	**0.53**	**España**
9.8	13.3	21.3	33.4	11.3	67.7	21.1	52.8	18.8	28.4	0.48	Noroeste
9.9	13.5	21.0	32.0	11.6	67.3	21.2	55.7	17.0	27.2	0.50	Galicia
10.2	13.4	24.4	39.8	10.1	68.0	21.9	49.1	20.8	30.0	0.43	Principado de Asturias
8.5	9.1	18.0	28.3	12.1	68.9	19.0	46.0	23.2	30.8	0.51	Cantabria
6.6	9.1	16.0	21.8	12.6	68.3	19.1	42.7	20.8	36.5	0.66	Noreste
7.3	9.6	19.1	24.8	12.1	69.7	18.3	39.8	19.5	40.8	0.66	País Vasco
6.2	9.8	14.8	17.7	14.1	68.1	17.8	43.2	19.9	36.9	0.72	Comunidad Foral de Navarra
6.2	9.8	14.2	22.6	13.2	67.8	19.0	47.4	22.8	29.8	0.61	La Rioja
5.8	8.6	12.8	16.9	12.7	66.2	21.1	46.7	23.1	30.2	0.62	Aragón
6.8	7.7	16.5	21.8	14.7	70.8	14.5	38.6	24.8	36.6	0.68	Comunidad de Madrid
10.2	15.8	21.0	26.0	13.8	65.5	20.8	58.1	17.8	24.1	0.45	Centro (ES)
8.7	13.6	19.4	24.9	11.7	65.7	22.6	51.5	20.0	28.6	0.53	Castilla y León
9.2	15.3	18.4	25.4	15.5	65.2	19.3	62.6	17.0	20.3	0.41	Castilla-La Mancha

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Extremadura	1067	25.6	0.0	67.1	75.5	3.6	13.5	24.4	62.0	0.4	0.1	54.4	39.9	35.6
Este	12115	200.7	1.3	110.2	92.8	3.8	2.9	33.5	63.6	1.1	0.6	67.4	56.2	46.8
Cataluña	6711	209.0	1.0	120.5	96.3	3.7	2.4	34.4	63.2	1.3	0.9	69.3	58.9	48.6
Comunidad Valenciana	4459	191.7	1.5	93.9	86.3	4.0	3.8	34.3	61.9	0.9	0.3	64.5	52.0	43.7
Illes Balears	945	189.3	2.6	114.3	94.5	4.1	2.0	23.9	74.1	0.3	0.1	67.9	57.5	47.7
Sur	9033	91.3	0.9	78.7	85.5	3.9	9.4	26.8	63.8	0.7	0.3	56.4	41.7	35.8
Andalucía	7612	86.9	0.8	77.6	85.9	3.8	9.2	25.8	65.0	0.8	0.3	55.4	40.7	34.9
Región de Murcia	1283	113.4	1.8	84.4	83.3	4.7	11.2	33.4	55.4	0.7	0.2	62.8	48.0	41.0
Ciudad Autónoma de Ceuta	71	3758.6	0.3	90.4	92.6	3.5	:	:	:	0.1	0.0	53.3	35.5	43.5
Ciudad Autónoma de Melilla	67	5156.1	1.0	87.9	83.3	3.8	:	:	:	0.1	0.0	51.4	34.2	44.2
Canarias	1887	253.4	2.1	92.8	90.6	4.2	3.5	20.0	76.5	0.6	0.1	59.7	48.6	40.5
France	**62324**	**98.5**	**0.5**	**112.3**	**134.2**	**2.3**	**3.8**	**24.3**	**71.9**	**2.2**	**1.4**	**62.6**	**57.0**	**37.8**
Île de France	11338	943.9	0.5	174.5	178.6	4.2	0.4	16.7	82.9	3.2	2.2	64.2	59.1	46.0
Bassin Parisien	10559	72.5	0.2	98.3	122.7	0.4	5.6	27.3	67.1	1.2	0.9	63.8	58.4	35.6
Champagne-Ardenne	1336	52.2	-0.1	104.5	128.9	-1.2	9.2	24.5	66.3	0.8	0.6	62.1	56.6	38.3
Picardie	1875	96.7	0.2	90.5	123.2	0.2	3.7	31.3	65.1	1.1	0.9	59.8	52.2	33.3
Haute-Normandie	1801	146.2	0.2	101.2	125.8	1.4	3.1	31.0	65.9	1.4	1.2	64.4	59.5	35.0
Centre	2487	63.5	0.3	100.9	122.9	0.8	4.7	24.5	70.8	1.5	1.1	67.2	63.3	34.2
Basse-Normandie	1442	82.0	0.3	94.3	115.8	0.3	6.1	24.6	69.3	1.0	0.6	63.8	57.2	39.6
Bourgogne	1619	51.3	0.0	98.4	119.4	0.3	8.3	27.9	63.8	1.0	0.7	64.2	58.8	34.6
Nord - Pas-de-Calais	4022	324.0	0.1	89.0	120.5	2.1	3.1	26.5	70.4	0.7	0.3	57.7	49.3	32.3
Est	5263	109.6	0.3	99.0	125.0	1.6	3.0	33.0	64.0	1.5	0.9	64.2	58.4	37.0
Lorraine	2328	98.9	0.1	92.8	124.4	1.3	3.9	30.2	66.0	1.1	0.5	62.0	56.4	35.9
Alsace	1797	217.0	0.7	107.8	129.2	2.0	1.9	32.1	66.0	1.6	0.9	67.6	62.8	41.8
Franche-Comté	1138	70.2	0.3	97.7	119.1	1.7	3.3	39.9	56.8	2.1	1.8	63.3	55.7	32.6
Ouest	8121	95.4	0.7	99.3	119.4	1.1	5.6	26.7	67.7	1.2	0.7	65.0	60.6	35.5
Pays de la Loire	3380	105.4	0.8	102.5	120.1	1.4	3.9	30.0	66.1	1.0	0.6	66.1	61.5	37.5
Bretagne	3044	111.9	0.8	98.6	119.4	1.2	6.4	23.4	70.3	1.6	1.0	63.7	59.6	30.3
Poitou-Charentes	1697	65.8	0.5	94.1	117.8	0.5	7.9	25.2	66.9	0.8	0.5	65.0	60.2	39.9
Sud-Ouest	6499	62.7	0.8	100.2	123.6	1.3	6.5	22.4	71.1	2.4	1.6	64.7	58.8	39.2
Aquitaine	3061	74.1	0.8	102.1	127.7	1.0	6.2	21.0	72.7	1.6	1.1	62.6	57.0	39.0
Midi-Pyrénées	2716	59.9	0.9	100.2	121.9	1.8	6.4	22.6	71.1	3.7	2.4	66.0	59.8	39.9
Limousin	722	42.6	0.1	91.7	112.9	0.9	8.1	26.9	65.0	0.8	0.5	67.8	62.7	37.9
Centre-Est	7249	104.0	0.6	109.4	129.6	2.8	3.1	28.3	68.6	2.6	1.8	65.0	60.2	37.4
Rhône-Alpes	5922	135.5	0.8	112.8	132.6	3.1	2.4	28.1	69.5	2.6	1.8	64.7	59.9	37.0
Auvergne	1327	51.0	0.1	94.5	115.6	1.4	6.0	29.0	65.0	2.4	1.9	66.8	61.7	38.7
Méditerranée	7475	110.8	0.9	98.6	129.6	2.7	3.4	18.3	78.3	1.9	0.9	56.7	50.7	35.9
Languedoc-Roussillon	2477	90.5	1.2	87.7	122.1	2.1	5.3	18.3	76.4	2.0	0.6	55.6	49.9	35.0
Provence-Alpes-Côte d'Azur	4723	150.4	0.8	104.9	134.1	2.9	2.4	18.5	79.1	1.9	1.1	57.5	51.7	36.3
Corse	275	31.7	0.7	87.2	114.9	2.5	3.0	12.6	84.4	0.2	0.0	52.8	38.8	35.3
Départements d'Outre-Mer	1798	20.1	1.2	64.4	108.8	2.6	2.8	13.6	83.6	1.4	:	43.6	37.7	32.2
Guadeloupe	441	258.7	0.6	66.9	105.4	2.0	2.5	13.3	84.1	:	:	45.0	40.3	37.2
Martinique	394	349.1	0.2	74.3	113.9	1.7	5.2	13.2	81.6	:	:	47.7	44.4	36.6
Guyane	196	2.3	2.8	54.4	104.3	0.7	2.3	14.0	83.8	:	:	42.7	35.8	36.9

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
15.8	22.4	28.3	28.0	15.6	65.4	19.0	65.8	14.1	20.1	0.28	Extremadura
7.0	8.4	17.3	21.2	14.5	69.0	16.5	50.9	21.6	27.5	0.58	Este
7.0	8.4	15.9	21.4	14.2	68.7	17.1	49.0	21.4	29.6	0.63	Cataluña
8.8	11.8	19.4	22.4	14.8	69.1	16.1	52.8	21.3	25.9	0.52	Comunidad Valenciana
7.2	9.9	17.7	13.2	15.7	70.3	14.0	55.6	23.9	20.4	0.52	Illes Balears
13.0	18.4	23.4	25.1	17.0	68.5	14.5	59.1	18.2	22.7	0.36	Sur
13.8	19.4	24.5	25.3	16.9	68.5	14.6	59.6	17.8	22.6	0.35	Andalucía
8.0	11.6	15.6	18.3	17.3	68.6	14.1	56.9	20.2	22.9	0.47	Región de Murcia
19.7	29.4	:	51.5	20.3	68.2	11.6	61.0	17.2	21.8	0.18	Ciudad Autónoma de Ceuta
13.9	23.3	:	36.7	22.2	66.8	11.0	50.5	22.0	27.5	0.30	Ciudad Autónoma de Melilla
11.7	14.4	24.3	26.1	16.1	71.9	12.0	53.7	22.0	24.2	0.43	Canarias
9.5	**10.5**	**22.3**	**42.5**	**18.5**	**65.1**	**16.3**	**33.6**	**41.5**	**24.9**	**0.62**	**France**
9.5	10.0	20.4	44.5	19.7	67.9	12.4	29.5	32.8	37.7	0.76	Île de France
8.7	9.7	22.8	41.5	18.6	64.5	16.9	38.5	42.4	19.0	0.57	Bassin Parisien
10.0	10.7	23.7	44.8	18.6	65.2	16.3	38.2	41.5	20.2	0.56	Champagne-Ardenne
11.4	13.4	32.7	40.1	20.1	65.4	14.5	42.8	38.4	18.7	0.48	Picardie
8.4	9.2	19.2	51.5	19.4	65.6	15.0	38.8	42.9	18.3	0.57	Haute-Normandie
7.2	7.8	19.8	34.8	18.1	63.8	18.1	36.1	44.9	18.9	0.62	Centre
7.8	9.3	21.1	36.8	18.5	63.5	18.0	36.3	43.1	20.7	0.59	Basse-Normandie
8.1	8.9	22.5	41.8	17.2	63.5	19.3	39.0	42.9	18.1	0.55	Bourgogne
13.2	14.7	29.8	46.9	20.5	65.4	14.1	39.6	40.5	19.9	0.43	Nord - Pas-de-Calais
8.6	9.6	21.2	37.6	18.4	66.1	15.5	33.2	45.7	21.1	0.62	Est
10.2	11.6	23.8	38.9	18.1	65.9	16.0	35.9	45.0	19.1	0.58	Lorraine
7.1	7.2	18.7	36.3	18.7	67.0	14.3	26.9	48.0	25.2	0.68	Alsace
7.9	9.6	20.1	36.0	18.7	64.9	16.4	38.0	43.6	18.4	0.58	Franche-Comté
7.7	8.9	19.8	35.9	18.2	63.6	18.2	31.0	46.1	22.9	0.62	Ouest
7.7	8.6	20.1	38.8	19.1	64.0	16.9	33.4	44.9	21.7	0.61	Pays de la Loire
7.3	8.8	17.2	29.3	18.1	63.4	18.4	25.6	48.0	26.3	0.61	Bretagne
8.4	9.6	23.8	39.7	16.8	63.0	20.3	35.2	45.2	19.7	0.63	Poitou-Charentes
7.7	9.6	16.8	37.8	16.6	63.8	19.6	30.1	45.9	24.0	0.66	Sud-Ouest
8.3	10.3	17.6	36.5	16.8	64.1	19.2	32.1	45.6	22.3	0.61	Aquitaine
7.5	9.8	15.7	40.0	16.8	64.0	19.2	27.6	46.1	26.3	0.70	Midi-Pyrénées
6.4	6.2	17.4	33.9	14.7	62.2	23.1	31.7	46.4	21.9	0.62	Limousin
8.2	8.8	18.5	36.4	18.7	65.2	16.1	31.8	44.4	23.8	0.67	Centre-Est
8.4	9.0	18.6	34.9	19.3	65.5	15.2	31.8	43.9	24.3	0.67	Rhône-Alpes
7.3	8.1	17.9	43.6	16.1	64.0	19.9	31.5	46.6	21.8	0.67	Auvergne
11.5	12.2	25.7	45.4	17.5	63.8	18.8	38.5	38.4	23.1	0.52	Méditerranée
12.3	12.5	26.9	40.7	17.3	63.6	19.1	39.9	37.2	22.9	0.51	Languedoc-Roussillon
11.2	11.8	24.9	47.7	17.6	63.8	18.6	36.6	39.7	23.7	0.54	Provence-Alpes-Côte d'Azur
10.9	18.1	33.3	54.7	16.3	64.7	19.0	64.2	23.2	12.6	0.25	Corse
26.1	28.7	51.9	73.8	26.0	64.9	9.1	:	:	:	:	Départements d'Outre-Mer
25.9	29.5	59.1	77.9	24.0	65.1	11.0	:	:	:	:	Guadeloupe
18.7	20.4	42.7	75.8	21.6	65.3	13.1	:	:	:	:	Martinique
24.8	27.1	52.5	74.9	35.3	60.8	3.9	:	:	:	:	Guyane

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Réunion	767	304.5	1.7	60.5	109.0	4.1	1.7	13.8	84.5	:	:	40.9	33.3	25.4
Italia	**58175**	**197.1**	**0.3**	**107.4**	**115.7**	**1.3**	**4.2**	**30.8**	**65.0**	**1.1**	**0.5**	**57.6**	**45.3**	**31.4**
Nord-Ovest	15327	272.6	0.3	131.9	127.0	1.2	2.4	36.2	61.4	1.3	0.9	64.7	54.5	28.8
Piemonte	4300	173.0	0.1	119.5	118.4	1.0	3.9	36.1	60.0	1.6	1.2	64.0	54.4	28.1
Valle d'Aosta/Vallée d'Aoste	122	37.8	0.5	128.2	121.5	0.4	4.9	25.7	69.3	0.4	0.2	66.4	58.0	31.0
Liguria	1585	297.4	-0.4	109.7	123.9	1.1	2.1	21.4	76.5	1.1	0.6	61.1	50.5	29.9
Lombardia	9320	408.8	0.5	141.5	131.2	1.2	1.7	38.6	59.7	1.2	0.8	65.5	55.1	28.8
Nord-Est	10957	182.1	0.6	127.9	119.5	1.3	4.1	36.2	59.7	0.9	0.5	66.1	56.0	29.9
Provincia Autonoma Bolzano/Bozen	474	64.4	0.7	140.2	121.1	1.4	7.8	24.2	68.0	0.3	0.2	69.2	59.0	36.8
Provincia Autonoma Trento	494	80.5	0.9	126.9	123.9	1.4	5.3	28.9	65.8	1.1	0.2	65.1	54.7	27.6
Veneto	4671	265.9	0.7	127.4	120.4	1.4	3.6	39.2	57.1	0.7	0.3	64.6	53.0	27.4
Friuli-Venezia Giulia	1201	159.0	0.2	117.4	113.6	0.8	2.7	34.8	62.5	1.1	0.5	63.2	54.0	26.4
Emilia-Romagna	4116	191.2	0.6	130.4	119.4	1.1	4.4	35.4	60.2	1.2	0.7	68.4	60.0	33.4
Centro (IT)	11185	195.0	0.3	121.4	118.6	1.7	2.8	26.7	70.5	1.4	0.4	61.1	50.8	35.1
Toscana	3582	158.1	0.3	116.9	114.2	1.5	3.9	31.1	65.0	1.1	0.4	63.8	54.1	35.5
Umbria	853	103.4	0.5	101.0	104.2	1.5	4.3	32.0	63.7	0.8	0.2	61.6	51.0	32.9
Marche	1512	158.2	0.6	107.5	102.7	1.7	3.5	39.6	56.9	0.7	0.3	63.6	53.3	32.8
Lazio	5238	310.0	0.2	131.8	128.5	1.7	1.5	18.7	79.8	1.9	0.5	58.5	48.0	35.8
Sud	14051	195.0	0.0	70.8	97.2	1.4	7.2	25.4	67.4	0.8	0.2	45.9	29.9	32.3
Abruzzo	1293	121.5	0.3	84.9	100.7	0.4	4.3	30.6	65.1	1.1	0.5	57.3	44.7	35.8
Molise	322	73.6	-0.2	77.1	95.4	1.2	6.4	31.5	62.1	0.4	0.0	51.2	36.7	37.2
Campania	5775	431.2	0.2	68.4	95.8	1.7	4.8	24.0	71.2	1.0	0.3	44.2	27.9	32.4
Puglia	4055	211.3	-0.0	69.8	99.0	1.2	8.8	27.4	63.8	0.6	0.1	44.6	26.8	27.7
Basilicata	597	61.4	-0.2	75.4	95.4	1.4	9.7	28.8	61.5	0.5	0.2	49.3	34.6	36.5
Calabria	2010	136.3	-0.3	68.5	96.0	1.7	12.4	19.3	68.3	0.4	0.0	44.6	30.8	37.7
Isole	6655	135.0	0.0	70.8	102.1	1.2	7.3	20.5	72.2	0.7	0.1	46.0	30.4	32.6
Sicilia	5008	197.1	0.0	67.3	102.9	1.1	7.7	19.2	73.1	0.8	0.2	44.1	28.1	33.0
Sardegna	1647	68.9	-0.0	81.4	100.1	1.3	6.3	23.8	69.8	0.7	0.1	51.5	37.1	31.3
Kýpros / Kıbrıs	**740**	**129.9**	**1.4**	**91.4**	**72.7**	**3.4**	**4.7**	**24.1**	**71.2**	**0.4**	**0.1**	**68.5**	**58.4**	**50.5**
Latvija	**2313**	**37.1**	**-0.8**	**45.5**	**22.3**	**6.4**	**11.8**	**26.5**	**61.7**	**0.4**	**0.2**	**63.3**	**59.3**	**49.5**
Lietuva	**3436**	**54.8**	**-0.6**	**51.1**	**25.7**	**6.0**	**14.0**	**29.1**	**56.9**	**0.8**	**0.2**	**62.6**	**59.4**	**49.2**
Luxembourg (Grand-Duché)	**453**	**175.3**	**1.1**	**251.0**	**182.3**	**4.6**	**1.8**	**17.3**	**80.9**	**2.0**	**1.5**	**63.6**	**53.7**	**31.8**
Magyarország	**10107**	**108.6**	**-0.2**	**64.0**	**42.8**	**4.5**	**4.9**	**32.5**	**62.7**	**0.9**	**0.4**	**56.9**	**51.0**	**33.0**
Közép-Magyarország	2835	409.8	-0.4	101.6	56.8	5.0	1.3	24.3	74.4	1.3	0.6	63.3	57.5	42.6
Közép-Magyarország	2835	409.8	-0.4	101.6	56.8	5.0	1.3	24.3	74.4	1.3	0.6	63.3	57.5	42.6
Dunántúl	3094	84.5	-0.2	58.0	39.0	4.8	5.8	38.8	55.4	0.4	0.2	58.7	52.3	32.2
Közép-Dunántúl	1112	100.0	-0.2	61.1	41.6	5.5	4.6	43.1	52.3	0.5	0.2	60.2	52.9	34.0
Nyugat-Dunántúl	1002	88.4	-0.1	66.8	40.7	5.2	5.3	39.2	55.4	0.4	0.2	62.1	55.9	34.6
Dél-Dunántúl	981	69.2	-0.3	45.6	33.7	3.2	7.9	32.7	59.3	0.4	0.1	53.4	47.8	27.6
Alföld és Észak	4178	84.4	-0.2	42.8	33.1	3.5	7.1	34.1	58.8	0.5	0.2	51.1	45.3	26.2
Észak-Magyarország	1276	95.0	-0.3	42.5	35.2	3.6	3.9	37.3	58.8	0.3	0.1	49.5	44.7	23.5
Észak-Alföld	1544	87.1	-0.1	41.9	32.7	4.0	7.0	32.3	60.7	0.7	0.3	50.2	43.9	26.3
Dél-Alföld	1358	74.0	-0.2	44.2	31.8	2.9	9.9	33.2	56.9	0.6	0.1	53.8	47.4	28.4
Malta	**401**	**1271.2**	**0.7**	**74.4**	**58.8**		**2.0**	**30.0**	**68.0**	**0.6**	**0.4**	**53.9**	**33.6**	**30.8**

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
30.1	33.3	52.2	71.8	27.1	65.7	7.2	:	:	:	:	Réunion
7.7	**10.1**	**24.0**	**49.9**	**14.2**	**66.6**	**19.2**	**49.3**	**38.5**	**12.2**	**0.47**	**Italia**
4.4	6.0	14.6	37.1	12.9	66.7	20.5	46.5	41.2	12.3	0.58	Nord-Ovest
4.7	6.4	16.9	43.8	12.3	65.8	21.9	48.6	40.2	11.2	0.56	Piemonte
3.2	4.1	10.5	24.7	13.2	67.2	19.6	53.5	36.0	10.6	0.57	Valle d'Aosta/Vallée d'Aoste
5.8	9.1	20.0	37.9	10.9	62.9	26.2	41.1	44.4	14.5	0.55	Liguria
4.1	5.4	13.0	33.8	13.5	67.7	18.8	46.3	41.2	12.5	0.59	Lombardia
4.0	5.6	11.3	31.1	13.1	66.5	20.4	47.8	40.1	12.1	0.59	Nord-Est
2.7	3.5	7.3	14.2	17.1	66.8	16.1	52.2	37.5	10.3	0.61	Provincia Autonoma Bolzano/Bozen
3.6	5.2	10.3	22.2	15.3	66.4	18.3	41.8	46.0	12.1	0.62	Provincia Autonoma Trento
4.2	6.2	12.6	34.6	13.7	67.6	18.7	50.0	38.8	11.2	0.55	Veneto
6.4	8.3	10.5	31.3	11.8	66.3	21.9	46.1	41.9	12.0	0.55	Friuli-Venezia Giulia
6.4	8.3	10.7	29.0	12.1	65.2	22.6	46.0	40.7	13.3	0.64	Emilia-Romagna
6.4	8.3	21.1	45.2	13.1	66.1	20.8	43.2	41.9	15.0	0.57	Centro (IT)
4.7	6.5	16.7	33.4	12.0	65.2	22.9	49.4	37.2	13.4	0.60	Toscana
4.7	6.5	18.5	42.7	12.4	64.5	23.1	41.3	44.7	13.9	0.53	Umbria
4.7	6.5	15.1	36.8	13.0	64.8	22.1	46.2	39.8	14.0	0.53	Marche
7.8	12.7	26.5	52.8	13.9	67.4	18.7	38.4	45.2	16.4	0.57	Lazio
7.8	12.7	37.2	58.3	16.6	66.8	16.6	55.2	33.8	11.0	0.27	Sud
7.8	12.7	23.0	46.5	13.7	65.4	20.9	43.8	41.6	14.7	0.47	Abruzzo
14.6	20.9	31.8	53.4	13.8	64.7	21.5	48.6	38.0	13.4	0.38	Molise
14.6	20.9	38.8	60.4	18.0	67.2	14.8	56.6	32.4	10.9	0.24	Campania
14.6	20.9	35.4	56.9	16.2	67.2	16.6	59.4	31.2	9.4	0.21	Puglia
12.3	18.4	36.6	56.3	15.1	65.6	19.3	50.5	38.9	10.5	0.34	Basilicata
15.3	20.5	46.1	61.2	15.9	66.5	17.6	52.0	36.2	11.9	0.29	Calabria
15.3	20.5	41.5	60.0	15.8	66.9	17.2	57.3	32.7	10.0	0.23	Isole
16.2	21.6	44.8	61.7	16.7	65.9	17.4	56.7	33.0	10.2	0.23	Sicilia
12.9	18.0	32.6	54.6	13.4	69.9	16.7	58.9	31.7	9.4	0.24	Sardegna
5.3	**6.5**	**13.9**	**23.5**	**20.0**	**68.1**	**11.9**	**32.6**	**38.7**	**28.8**	**0.63**	**Kýpros / Kıbrıs**
8.9	**8.7**	**13.6**	**46.0**	**15.4**	**68.4**	**16.2**	**15.5**	**64.0**	**20.5**	**0.45**	**Latvija**
8.3	**8.3**	**15.7**	**52.5**	**17.7**	**67.3**	**15.0**	**12.4**	**61.3**	**26.3**	**0.50**	**Lietuva**
4.5	**5.8**	**13.7**	**26.4**	**18.8**	**67.1**	**14.1**	**28.3**	**45.2**	**26.5**	**0.67**	**Luxembourg (Grand-Duché)**
7.2	**7.4**	**19.4**	**45.0**	**15.9**	**68.6**	**15.5**	**23.6**	**59.3**	**17.1**	**0.44**	**Magyarország**
5.1	5.7	14.4	47.5	14.4	69.5	16.1	15.8	57.6	26.6	0.61	Közép-Magyarország
5.1	5.7	14.4	47.5	14.4	69.5	16.1	15.8	57.6	26.6	0.61	Közép-Magyarország
6.9	7.2	16.8	42.9	15.6	69.2	15.1	25.5	61.5	13.0	0.42	Dunántúl
6.3	6.8	13.9	42.0	16.0	69.6	14.4	27.5	59.9	12.6	0.45	Közép-Dunántúl
5.9	6.2	13.5	40.1	15.0	69.5	15.5	22.4	64.0	13.6	0.47	Nyugat-Dunántúl
8.8	8.8	24.9	45.9	15.8	68.6	15.7	26.3	60.7	12.9	0.31	Dél-Dunántúl
9.2	9.2	24.7	45.3	17.0	67.6	15.3	27.8	58.9	13.3	0.28	Alföld és Észak
10.6	10.0	28.5	47.4	17.1	67.2	15.7	27.4	59.7	12.9	0.22	Észak-Magyarország
9.0	9.0	24.8	42.6	18.1	67.7	14.2	30.2	56.5	13.3	0.29	Észak-Alföld
8.1	8.6	21.0	45.9	15.8	68.0	16.2	25.5	60.8	13.7	0.34	Dél-Alföld
7.0	**8.9**	**16.8**	**46.4**	**18.2**	**68.7**	**13.0**	**74.7**	**13.9**	**11.4**	**0.27**	**Malta**

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Nederland	**16276**	**481.8**	**0.6**	**130.0**	**120.5**	**2.6**	**3.3**	**20.5**	**76.1**	**1.8**	**1.0**	**73.2**	**66.4**	**46.1**
Noord-Nederland	1700	204.1	0.5	120.6	:	1.8	4.7	23.1	72.2	1.2	0.6	71.1	64.9	43.2
Groningen	575	245.9	0.3	153.7	160.1	1.9	3.8	20.6	75.6	1.5	0.2	69.4	63.3	41.0
Friesland	642	191.8	0.6	105.6	112.3	2.0	5.7	24.6	69.7	0.8	0.8	71.9	65.5	43.3
Drenthe	483	182.7	0.6	100.9	111.8	1.4	4.6	24.0	71.4	1.1	1.0	72.2	66.0	45.5
Oost-Nederland	3439	353.7	0.8	110.2	:	2.5	3.8	23.3	72.9	1.8	0.8	73.4	65.9	44.9
Overijssel	1107	332.8	0.6	113.5	109.9	2.4	3.8	26.1	70.1	1.4	0.7	72.9	64.8	43.7
Gelderland	1969	395.7	0.6	111.0	108.5	2.2	3.7	22.8	73.4	2.1	0.9	73.7	66.7	44.5
Flevoland	363	255.6	3.4	96.4	116.9	5.6	3.9	17.4	78.8	1.6	0.5	73.5	64.6	51.7
West-Nederland	7592	876.4	0.6	143.1	:	2.8	2.7	16.3	81.1	1.6	0.7	73.7	67.3	48.9
Utrecht	1166	841.4	1.0	157.7	129.0	3.0	1.5	15.4	83.1	1.8	0.5	75.9	69.7	50.4
Noord-Holland	2592	970.7	0.6	153.7	129.4	3.3	2.3	15.4	82.3	1.6	0.8	73.7	68.3	49.0
Zuid-Holland	3454	1225.6	0.4	132.8	124.9	2.3	3.1	16.4	80.6	1.5	0.6	73.0	66.1	48.8
Zeeland	379	212.2	0.4	118.8	123.8	1.8	5.7	25.1	69.3	0.8	0.7	73.1	64.5	44.5
Zuid-Nederland	3546	501.4	0.4	125.6	:	2.6	3.7	26.0	70.3	2.5	2.1	73.0	65.6	43.3
Noord-Brabant	2408	489.6	0.6	129.8	119.7	2.8	3.6	26.3	70.1	2.7	2.4	74.3	66.9	44.5
Limburg (NL)	1138	528.4	0.1	116.7	120.4	2.4	4.1	25.2	70.7	2.0	1.5	70.1	62.9	40.9
Österreich	**8175**	**99.1**	**0.3**	**128.7**	**120.9**	**2.2**	**5.5**	**27.5**	**66.9**	**2.2**	**1.5**	**68.7**	**62.0**	**31.8**
Ostösterreich	3454	150.1	0.4	138.3	132.7	2.0	4.5	23.0	72.6	2.4	1.5	66.8	61.0	31.6
Burgenland	277	75.4	-0.0	89.8	96.8	3.2	6.4	29.3	64.3	0.5	0.5	68.1	59.9	29.5
Niederösterreich	1564	82.6	0.3	104.4	110.6	2.2	8.0	25.8	66.2	0.9	0.8	69.9	63.1	31.8
Wien	1613	4072.8	0.5	179.7	155.2	1.8	0.6	19.0	80.4	3.4	1.9	63.8	59.4	31.7
Südösterreich	1755	68.5	0.1	110.1	104.4	2.4	6.9	31.0	62.1	2.9	2.1	68.1	60.8	27.9
Kärnten	560	59.8	-0.0	108.6	105.9	2.0	5.3	30.6	64.0	2.3	2.0	66.5	58.7	27.3
Steiermark	1195	73.6	0.1	110.8	103.7	2.6	7.6	31.2	61.2	3.2	2.1	68.9	61.9	28.3
Westösterreich	2966	87.6	0.4	128.4	117.3	2.3	5.9	30.6	63.5	1.7	1.2	71.1	63.7	34.6
Oberösterreich	1393	118.6	0.3	120.2	110.4	2.4	6.9	33.4	59.7	1.9	1.7	70.5	62.7	30.2
Salzburg	525	74.4	0.4	141.8	121.4	1.9	4.9	25.0	70.2	1.0	0.6	72.7	66.8	38.6
Tirol	689	55.0	0.6	131.4	119.6	2.4	5.7	26.2	68.1	2.1	1.1	71.0	64.0	37.5
Vorarlberg	359	141.8	0.6	134.4	134.5	2.7	3.8	37.5	58.8	1.3	1.2	70.8	62.0	39.4
Polska	**38180**	**122.1**	**-0.1**	**50.7**	**29.9**	**4.3**	**17.4**	**29.2**	**53.4**	**0.6**	**0.2**	**52.8**	**46.8**	**27.2**
Centralny	7733	143.7	-0.0	66.7	34.2	5.7	16.2	25.1	58.7	1.0	0.3	56.3	50.8	29.5
Łódzkie	2592	142.3	-0.4	46.7	26.4	4.3	16.8	31.0	52.2	0.5	0.1	54.1	49.2	23.3
Mazowieckie	5141	144.5	0.2	76.8	37.6	6.2	15.9	21.7	62.4	1.2	0.3	57.6	51.8	33.3
Południowy	7964	289.4	-0.2	51.4	30.6	3.8	12.4	34.1	53.5	0.5	0.1	51.7	46.1	24.4
Małopolskie	3256	214.4	0.3	43.4	25.6	4.2	23.1	27.9	49.0	1.0	0.2	55.0	49.8	33.2
Śląskie	4708	381.8	-0.5	57.0	34.1	3.5	4.3	38.8	56.8	0.3	0.1	49.5	43.8	18.6
Wschodni	6779	90.6	-0.2	36.5	21.8	3.4	32.2	22.7	45.1	0.3	0.1	54.1	49.2	32.8
Lubelskie	2188	87.1	-0.3	35.2	20.9	2.7	35.9	19.3	44.8	0.5	0.1	56.0	51.0	34.9
Podkarpackie	2097	117.5	-0.0	35.4	21.3	3.5	25.6	28.3	46.0	0.3	0.2	52.3	48.0	32.2
Świętokrzyskie	1290	110.3	-0.4	39.3	22.6	4.0	33.2	22.5	44.2	0.1	0.0	51.6	47.1	30.8
Podlaskie	1204	59.6	-0.2	37.9	23.4	3.9	34.4	20.7	44.9	0.2	0.0	56.9	50.4	32.0
Północno-zachodni	6067	90.9	0.0	51.0	30.3	4.7	14.0	32.6	53.4	0.3	0.1	52.0	44.5	25.6
Wielkopolskie	3362	112.7	0.1	54.5	29.5	5.9	16.5	34.8	48.8	0.4	0.1	54.0	45.8	26.8

Labour market				Age structure			Education				
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High	Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
4.7	**5.1**	**8.2**	**40.2**	**18.5**	**67.6**	**13.8**	**28.2**	**41.7**	**30.1**	**0.72**	**Nederland**
5.7	6.0	9.8	42.4	18.2	66.9	14.9	29.0	44.5	26.5	0.29	Noord-Nederland
6.6	7.1	9.7	47.5	16.9	68.7	14.5	27.2	43.1	29.6	0.72	Groningen
4.9	5.1	9.6	41.6	19.0	66.3	14.6	30.0	45.6	24.4	0.63	Friesland
5.7	6.0	10.3	36.1	18.6	65.6	15.9	29.6	44.9	25.6	0.64	Drenthe
4.7	5.3	8.2	36.8	19.6	67.0	13.4	29.3	43.3	27.4	0.33	Oost-Nederland
4.9	5.2	7.9	36.7	19.5	66.6	13.9	29.1	44.4	26.5	0.67	Overijssel
4.3	4.8	7.7	37.7	19.0	67.0	14.0	30.1	42.0	27.9	0.70	Gelderland
6.6	8.4	11.2	34.1	23.2	68.2	8.6	25.8	47.2	27.1	0.68	Flevoland
4.7	4.8	8.4	39.3	18.4	68.0	13.6	26.5	39.9	33.6	0.36	West-Nederland
3.7	3.8	6.8	33.5	19.2	68.3	12.5	23.2	37.0	39.8	0.81	Utrecht
4.9	4.8	8.1	43.3	18.0	68.5	13.5	23.8	40.0	36.2	0.73	Noord-Holland
4.9	5.3	9.4	37.8	18.5	67.7	13.8	29.4	39.9	30.8	0.72	Zuid-Holland
3.3	3.5	6.2	41.0	18.4	65.0	16.6	30.5	47.5	22.0	0.66	Zeeland
4.4	4.9	7.0	44.3	18.0	67.8	14.2	30.2	42.8	26.9	0.35	Zuid-Nederland
3.9	4.4	6.5	43.3	18.5	67.9	13.6	29.0	42.7	28.3	0.75	Noord-Brabant
5.4	6.0	8.3	46.0	16.8	67.6	15.6	32.8	43.2	24.0	0.65	Limburg (NL)
5.2	**5.5**	**10.3**	**25.3**	**16.3**	**68.1**	**15.5**	**19.4**	**62.8**	**17.8**	**0.70**	**Österreich**
6.7	6.5	14.0	29.0	15.6	68.4	16.0	19.0	61.1	19.9	0.68	Ostösterreich
6.0	7.4	12.8	29.0	14.7	66.8	18.5	23.6	63.7	12.7	0.56	Burgenland
4.3	4.8	8.9	27.6	16.6	67.1	16.3	18.3	64.4	17.3	0.65	Niederösterreich
9.1	7.9	19.7	29.7	14.7	70.0	15.2	19.0	57.7	23.4	0.69	Wien
4.3	5.1	8.9	21.2	15.7	67.6	16.7	17.0	66.5	16.5	0.68	Südösterreich
4.8	6.5	10.2	18.5	16.0	67.3	16.7	14.9	69.0	16.1	0.66	Kärnten
4.1	4.4	8.3	22.6	15.5	67.8	16.7	18.0	65.3	16.7	0.70	Steiermark
3.9	4.5	7.7	20.7	17.6	68.1	14.3	21.3	62.8	16.0	0.72	Westösterreich
4.0	4.8	6.9	24.4	17.5	67.3	15.1	22.4	62.3	15.4	0.69	Oberösterreich
3.2	3.4	6.5	18.1	17.2	69.1	13.7	17.9	63.2	18.8	0.75	Salzburg
3.5	3.8	8.2	13.5	17.5	68.7	13.8	19.8	65.3	14.9	0.77	Tirol
5.3	6.6	10.4	21.3	18.8	68.4	12.9	24.9	59.2	15.9	0.72	Vorarlberg
17.7	**19.1**	**36.9**	**57.7**	**17.2**	**69.8**	**13.0**	**15.2**	**68.0**	**16.8**	**0.27**	**Polska**
15.7	16.5	32.3	59.5	16.2	69.3	14.5	14.5	64.8	20.7	0.36	Centralny
17.3	17.9	33.1	62.2	15.7	69.6	14.7	16.6	67.4	16.0	0.22	Łódzkie
14.8	15.7	31.9	57.7	16.4	69.2	14.4	13.3	63.2	23.5	0.43	Mazowieckie
17.4	19.0	38.0	65.4	16.8	70.5	12.7	12.7	71.3	16.0	0.24	Południowy
15.2	15.6	36.7	67.9	18.4	68.6	13.0	14.4	68.6	17.0	0.33	Małopolskie
19.0	21.4	38.8	63.9	15.7	71.8	12.5	11.6	73.0	15.4	0.17	Śląskie
15.9	16.4	36.5	56.5	18.4	67.9	13.7	17.2	66.7	16.0	0.27	Wschodni
14.3	14.3	30.3	52.2	18.1	67.9	14.1	16.3	66.4	17.3	0.32	Lubelskie
16.7	17.3	43.3	54.9	19.5	68.0	12.6	15.9	70.0	14.1	0.25	Podkarpackie
18.9	18.6	43.6	63.4	17.2	68.2	14.6	17.6	66.2	16.2	0.19	Świętokrzyskie
14.4	16.1	30.6	58.2	18.2	67.7	14.2	21.2	62.1	16.7	0.29	Podlaskie
18.9	21.4	36.5	51.8	17.7	70.6	11.7	15.3	69.3	15.5	0.24	Północno-zachodni
17.1	20.4	34.9	59.4	18.1	70.2	11.7	13.9	70.7	15.4	0.27	Wielkopolskie

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Zachodniopomorskie	1695	74.0	-0.2	47.2	32.0	2.8	10.2	28.2	61.7	0.2	0.0	48.3	41.8	25.5
Lubuskie	1009	72.1	-0.1	45.4	31.2	3.5	11.4	31.9	56.7	0.1	0.0	51.1	44.4	22.3
Południowo-zachodni	3949	134.5	-0.4	49.5	32.1	3.5	11.0	32.6	56.3	0.3	0.1	50.1	44.1	23.9
Dolnośląskie	2896	145.2	-0.4	51.7	32.6	3.7	8.5	33.0	58.4	0.4	0.1	49.3	44.0	23.2
Opolskie	1054	111.9	-0.4	43.6	30.4	2.8	18.2	31.6	50.3	0.1	0.0	52.5	44.4	26.1
Północny	5688	94.1	-0.0	45.5	29.7	3.7	15.0	31.2	53.8	0.3	0.1	50.6	43.6	25.4
Kujawsko-Pomorskie	2068	115.1	-0.1	45.4	28.4	3.2	17.2	32.4	50.5	0.3	0.2	51.5	44.9	25.2
Warmińsko-Mazurskie	1429	59.0	-0.2	39.4	28.3	4.0	16.4	30.4	53.2	0.2	0.0	48.7	42.4	23.2
Pomorskie	2191	119.8	0.2	49.6	31.8	4.0	11.7	30.5	57.8	0.5	0.1	51.0	43.3	27.2
Portugal	**10502**	**114.2**	**0.5**	**74.8**	**57.8**	**2.6**	**11.8**	**30.6**	**57.6**	**0.7**	**0.3**	**67.5**	**61.7**	**50.5**
Continente	10018	112.8	0.5	74.6	57.5	2.6	11.9	30.8	57.3	0.8	0.3	67.6	62.0	50.6
Norte	3720	174.8	0.5	58.8	47.0	1.8	12.8	39.6	47.5	0.6	0.2	65.9	59.6	47.2
Algarve	408	81.9	1.7	77.1	59.4	3.4	6.7	20.7	72.6	0.2	0.0	68.0	59.9	54.2
Centro (PT)	2372	84.2	0.4	64.3	46.6	2.9	22.1	30.3	47.6	0.6	0.2	71.4	66.4	62.5
Lisboa	2750	960.2	0.6	105.8	78.1	2.8	0.8	22.3	76.9	1.0	0.4	66.8	62.7	45.1
Alentejo	768	24.4	0.0	70.3	64.9	3.1	13.4	24.2	62.4	0.4	0.1	67.0	59.2	49.1
Região Autónoma dos Açores	241	103.6	0.1	65.9	60.3	3.6	12.4	25.5	62.1	0.5	0.0	63.0	47.4	38.8
Região Autónoma da Madeira	244	294.3	-0.2	90.8	72.3	4.1	9.0	26.2	64.8	0.2	0.0	67.6	60.5	54.8
România	**21673**	**94.2**	**-0.5**	**34.0**	**14.7**	**1.9**	**32.3**	**30.5**	**37.3**	**0.4**	**0.2**	**57.6**	**51.5**	**39.5**
Macroregiunea unu	5279	78.3	-0.6	34.2	14.0	2.1	24.9	36.5	38.7	:	:	55.0	48.9	32.2
Nord-Vest	2741	81.5	-0.6	33.0	13.3	2.3	29.9	32.2	37.9	0.1	0.1	55.9	51.1	35.5
Centru	2537	75.1	-0.6	35.5	14.7	1.8	19.1	41.3	39.6	0.2	0.1	54.0	46.6	28.4
Macroregiunea doi	6588	97.9	-0.3	26.7	12.7	1.0	42.5	25.1	32.5	:	:	58.4	53.3	46.3
Nord-Est	3737	103.4	-0.1	23.6	11.6	0.7	48.5	23.5	28.0	0.2	0.1	61.4	59.0	54.9
Sud-Est	2851	91.5	-0.4	30.7	14.1	1.4	33.5	27.5	39.1	0.1	0.1	54.6	46.2	36.1
Macroregiunea trei	5550	157.8	-0.6	42.8	18.1	2.8	23.2	31.1	45.7	:	:	58.5	51.5	36.3
Sud-Muntenia	3342	100.0	-0.6	28.4	13.2	0.9	38.0	31.5	30.5	0.4	0.4	57.9	50.2	42.5
Bucureşti-Ilfov	2208	1256.6	-0.6	64.5	23.9	4.5	1.6	30.5	67.9	1.2	0.5	59.3	53.4	26.6
Macroregiunea patru	4256	70.9	-0.7	33.4	14.1	1.7	36.9	31.1	32.1	:	:	58.4	52.0	42.8
Sud-Vest Oltenia	2318	81.4	-0.6	28.8	13.0	0.9	49.0	24.0	27.0	0.2	0.1	60.0	54.3	51.9
Vest	1938	61.4	-0.8	39.0	15.2	2.4	20.8	40.4	38.8	0.2	0.1	56.5	49.5	31.9
Slovenija	**1997**	**99.2**	**0.1**	**83.3**	**58.0**	**3.9**	**9.1**	**37.1**	**53.8**	**1.4**	**1.0**	**66.0**	**61.3**	**30.7**
Slovensko	**5382**	**109.8**	**0.0**	**56.7**	**33.3**	**3.8**	**4.7**	**38.8**	**56.4**	**0.5**	**0.3**	**57.7**	**50.9**	**30.3**
Bratislavský	600	292.6	-0.3	129.3	45.4	3.4	1.3	24.8	73.8	1.0	0.3	69.6	63.6	52.2
Západné Slovensko	1864	124.3	-0.1	52.7	31.5	4.0	5.2	42.8	52.0	0.4	0.3	60.6	53.7	28.8
Stredné Slovensko	1352	83.2	0.0	46.7	30.2	3.9	6.3	39.6	54.1	0.3	0.2	55.2	48.1	27.6
Východné Slovensko	1566	99.5	0.3	42.3	29.3	3.8	4.6	40.1	55.3	0.3	0.1	51.5	44.6	24.4
Suomi/Finland	**5227**	**17.2**	**0.3**	**115.5**	**129.7**	**3.7**	**4.8**	**25.8**	**69.4**	**3.5**	**2.4**	**68.4**	**66.5**	**52.8**
Manner-Suomi	5201	17.2	0.3	115.3	129.9	3.7	4.8	25.9	69.3	3.5	2.4	68.4	66.5	52.7
Itä-Suomi	668	9.5	-0.6	85.3	109.5	1.8	9.8	23.8	66.5	1.6	0.7	61.9	60.3	43.8
Etelä-Suomi	2575	63.1	0.6	133.4	138.9	4.1	2.5	24.2	73.2	3.5	2.4	71.7	70.2	57.5
Länsi-Suomi	1328	22.8	0.1	102.0	121.3	3.6	6.2	30.5	63.3	3.6	2.7	67.0	64.2	50.6
Pohjois-Suomi	631	4.7	0.0	101.6	125.7	3.6	7.7	25.6	66.7	4.7	3.6	63.9	61.4	46.6
Åland	26	17.3	0.5	146.3	118.3	2.9	3.7	15.4	80.9	0.1	0.1	77.6	76.7	61.1

Labour market				Age structure			Education				
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High	Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
22.7	24.8	41.7	45.8	17.1	71.1	11.8	18.0	65.9	16.1	0.19	Zachodniopomorskie
19.1	19.7	35.3	40.7	17.6	71.0	11.4	15.3	69.9	14.8	0.21	Lubuskie
21.4	23.0	42.8	53.1	15.9	71.0	13.1	13.7	69.7	16.6	0.21	Południowo-zachodni
19.7	21.9	45.0	53.6	15.8	71.1	13.2	13.3	69.4	17.3	0.20	Dolnośląskie
19.7	21.9	36.1	51.3	16.4	70.7	12.9	15.2	70.6	14.3	0.25	Opolskie
19.7	21.9	38.2	56.8	18.3	70.1	11.6	18.1	67.1	14.8	0.21	Północny
19.8	21.7	39.1	58.4	17.9	70.0	12.0	17.6	69.1	13.3	0.20	Kujawsko-Pomorskie
20.4	22.6	39.9	63.4	18.9	69.8	11.2	21.9	63.6	14.5	0.14	Warmińsko-Mazurskie
18.9	21.5	36.3	50.0	18.2	70.3	11.5	15.7	67.7	16.6	0.27	Pomorskie
7.6	**8.7**	**16.1**	**48.2**	**15.7**	**67.4**	**16.8**	**73.5**	**13.6**	**12.8**	**0.42**	**Portugal**
7.8	8.8	16.5	48.2	15.6	67.4	17.0	73.3	13.7	13.0	0.43	Continente
8.8	10.4	15.9	52.1	16.9	68.6	14.5	79.8	10.4	9.9	0.33	Norte
6.2	7.7	15.7	32.7	14.7	66.7	18.7	69.2	16.9	13.9	0.45	Algarve
5.2	6.3	14.6	45.2	14.6	65.6	19.8	77.8	12.1	10.2	0.49	Centro (PT)
8.6	8.8	18.3	48.2	15.3	68.6	16.0	60.9	19.0	20.1	0.48	Lisboa
9.1	10.6	20.4	40.8	13.4	63.8	22.7	76.7	13.4	9.8	0.41	Alentejo
4.1	5.8	8.6	39.7	20.3	67.1	12.6	81.3	11.0	7.8	0.30	Região Autónoma dos Açores
4.5	5.3	11.4	51.2	18.6	68.2	13.3	77.7	12.0	10.3	0.41	Região Autónoma da Madeira
7.2	**6.4**	**20.2**	**56.3**	**16.4**	**69.1**	**14.4**	**26.9**	**62.0**	**11.1**	**0.32**	**România**
7.1	6.7	19.3	53.6	:	:	:	26.6	64.0	9.4	:	Macroregiunea unu
5.9	5.6	18.9	53.6	16.9	69.7	13.4	29.0	61.9	9.1	0.28	Nord-Vest
8.4	8.0	19.9	53.6	16.5	70.2	13.4	24.1	66.3	9.7	0.23	Centru
6.6	5.5	18.5	52.9	:	:	:	29.9	61.1	9.0	:	Macroregiunea doi
5.7	4.6	17.1	52.1	19.2	66.9	14.0	29.4	61.2	9.4	0.37	Nord-Est
7.9	7.0	20.7	53.7	16.3	69.7	14.0	30.5	60.9	8.5	0.23	Sud-Est
8.3	7.7	24.4	59.1	:	:	:	23.7	61.1	15.2	:	Macroregiunea trei
9.2	8.9	25.0	59.2	16.1	67.8	16.2	29.6	62.5	7.9	0.30	Sud-Muntenia
6.9	6.2	23.4	58.9	12.4	73.2	14.4	15.5	59.1	25.4	0.39	Bucureşti-Ilfov
6.6	5.8	18.8	60.3	:	:	:	27.3	62.0	10.8	:	Macroregiunea patru
6.6	6.2	19.1	62.2	16.4	67.7	15.9	27.4	62.0	10.6	0.37	Sud-Vest Oltenia
6.7	5.3	18.4	57.9	15.8	70.1	14.1	27.2	61.9	10.9	0.26	Vest
6.5	**7.0**	**15.9**	**47.4**	**14.6**	**70.4**	**15.0**	**19.7**	**60.1**	**20.2**	**0.55**	**Slovenija**
16.3	**17.2**	**30.1**	**71.9**	**17.6**	**70.9**	**11.5**	**12.1**	**73.9**	**14.0**	**0.32**	**Slovensko**
5.3	6.2	9.8	39.1	13.9	74.0	12.1	7.4	64.2	28.4	0.71	Bratislavský
12.5	13.3	22.5	69.6	16.1	71.7	12.2	11.7	77.0	11.3	0.36	Západné Slovensko
19.6	21.4	34.7	69.8	17.9	70.5	11.5	12.6	73.3	14.0	0.24	Stredné Slovensko
23.1	24.0	41.4	78.5	20.3	69.2	10.5	14.3	74.6	11.2	0.14	Východné Slovensko
8.4	**8.6**	**20.1**	**25.8**	**17.6**	**66.8**	**15.6**	**21.2**	**44.2**	**34.6**	**0.79**	**Suomi/Finland**
8.4	8.6	20.1	25.9	17.6	66.8	15.6	21.2	44.2	34.7	0.79	Manner-Suomi
11.6	11.7	26.2	24.4	16.5	65.1	18.3	22.9	48.3	28.7	0.61	Itä-Suomi
6.9	7.0	17.0	28.2	17.5	68.1	14.4	21.0	41.4	37.6	0.85	Etelä-Suomi
8.8	9.5	20.8	25.0	17.3	65.6	17.1	21.7	45.7	32.6	0.77	Länsi-Suomi
11.1	11.3	25.8	22.2	19.7	65.8	14.4	19.1	48.3	32.6	0.74	Pohjois-Suomi
3.3	4.3	11.8	8.6	17.9	65.5	16.6	29.5	45.2	25.3	0.79	Åland

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Sverige	**8994**	**21.9**	**0.2**	**120.3**	**131.7**	**2.8**	**2.3**	**22.0**	**75.6**	**4.0**	**2.9**	**72.3**	**70.2**	**69.5**
Stockholm	1867	286.4	0.9	165.7	158.5	4.0	0.5	13.2	86.2	4.3	3.0	74.9	73.5	71.8
Östra Mellansverige	1512	39.2	0.1	101.7	120.7	2.2	2.6	25.1	72.3	4.2	2.6	70.6	68.8	68.4
Sydsverige	1307	93.5	0.4	110.2	128.4	2.9	2.6	22.2	75.3	4.1	3.1	69.7	66.8	68.2
Norra Mellansverige	827	12.9	-0.5	104.4	123.9	1.5	2.9	26.4	70.7	1.3	1.1	70.1	67.1	66.1
Mellersta Norrland	372	5.2	-0.6	109.7	121.8	0.8	3.2	20.3	76.5	0.5	0.3	71.7	70.8	66.7
Övre Norrland	509	3.3	-0.4	110.6	127.8	1.1	2.7	21.4	75.9	2.5	0.6	69.8	68.5	63.9
Småland med öarna	799	24.0	-0.2	107.5	115.9	2.3	4.6	29.1	66.3	0.9	0.7	75.1	72.5	73.8
Västsverige	1801	61.2	0.3	114.1	124.2	3.1	2.3	24.6	73.1	6.0	5.3	73.4	71.1	71.3
United Kingdom	**59834**	**245.4**	**0.3**	**123.0**	**123.0**	**2.9**	**1.4**	**22.1**	**76.5**	**1.9**	**1.2**	**71.7**	**65.9**	**56.9**
North East	2546	295.6	-0.2	97.2	121.4	1.8	0.7	24.0	75.3	0.9	0.8	66.8	62.5	47.4
Tees Valley and Durham	1149	377.1	-0.1	89.6	120.1	1.1	0.9	27.0	71.8	:	:	66.6	61.9	47.2
Northumberland and Tyne and Wear	1397	251.0	-0.2	103.4	122.4	2.3	1.1	21.3	77.6	:	:	67.0	63.0	47.6
North West	6824	481.7	-0.0	107.8	119.7	2.3	0.7	22.9	76.3	1.9	1.4	70.2	65.5	51.4
Cumbria	494	72.4	0.2	95.3	109.9	1.1	3.1	25.0	72.0	:	:	76.6	74.7	58.6
Cheshire	992	425.5	0.3	129.9	137.4	2.4	1.1	23.8	75.6	:	:	73.5	70.6	58.3
Greater Manchester	2538	1973.8	-0.1	116.1	121.2	2.7	0.5	22.7	76.8	:	:	69.8	64.2	52.0
Lancashire	1434	467.1	0.2	101.9	116.2	2.0	1.2	23.7	75.1	:	:	70.4	64.7	48.4
Merseyside	1365	2083.6	-0.4	87.3	108.0	1.9	0.5	20.8	78.5	:	:	65.9	61.6	44.8
Yorkshire and the Humber	5036	323.5	0.1	107.4	118.9	2.5	1.4	25.3	73.3	0.9	0.5	71.0	65.0	56.4
East Riding and North Lincolnshire	887	242.4	0.1	103.8	124.1	1.8	2.4	28.4	69.2	:	:	68.0	60.8	56.4
North Yorkshire	764	91.9	0.6	112.5	109.5	3.2	4.1	19.5	76.5	:	:	76.3	71.8	56.1
South Yorkshire	1278	819.7	-0.1	94.9	112.0	2.7	0.3	27.9	71.4	:	:	68.5	62.1	54.4
West Yorkshire	2107	1035.7	0.1	114.7	124.3	2.5	0.5	24.7	74.6	:	:	72.0	66.2	58.0
East Midlands	4278	273.7	0.5	114.1	124.8	3.1	1.7	26.6	71.7	1.8	1.3	73.5	67.8	58.2
Derbyshire and Nottinghamshire	2013	420.4	0.2	111.6	125.1	2.8	1.2	27.9	70.8	:	:	72.5	67.5	56.0
Leicestershire, Rutland and Northamptonshire	1592	323.7	0.6	125.9	127.9	3.6	1.2	25.8	73.0	:	:	74.8	69.5	63.3
Lincolnshire	672	113.6	1.2	93.5	115.2	2.5	4.5	24.6	71.0	:	:	73.1	64.3	54.5
West Midlands	5336	410.4	0.2	110.1	119.8	2.4	1.0	26.7	72.3	1.4	0.7	71.1	64.8	57.1
Herefordshire, Worcestershire and Warwickshire	1256	212.7	0.7	111.2	121.5	3.3	2.3	26.6	71.1	:	:	76.5	71.4	60.2
Shropshire and Staffordshire	1500	241.7	0.3	97.9	107.7	2.5	1.0	27.7	71.2	:	:	73.5	66.0	56.5
West Midlands	2581	2871.9	-0.1	116.7	125.3	1.9	0.2	26.0	73.7	:	:	67.1	60.8	55.7
East of England	5495	287.4	0.6	118.0	124.8	3.2	1.5	22.3	76.2	3.9	3.5	75.2	68.5	62.2
East Anglia	2239	178.1	0.7	113.7	115.8	2.8	2.2	23.4	74.4	:	:	74.9	68.5	61.4
Bedfordshire and Hertfordshire	1620	563.4	0.6	137.6	140.7	3.6	0.7	21.3	78.0	:	:	76.1	69.4	64.9
Essex	1636	445.2	0.5	104.3	119.8	3.3	1.2	22.0	76.8	:	:	74.8	67.3	60.7
London	7438	4696.5	0.8	188.5	155.9	3.7	0.3	13.8	85.9	1.1	0.4	67.3	60.6	58.6
Inner London	2937	9163.5	1.2	302.9	171.6	4.3	0.1	11.9	87.1	:	:	62.7	56.0	51.0
Outer London	4501	3563.1	0.6	113.9	135.6	2.7	0.3	14.9	84.5	:	:	70.3	63.6	62.4
South East	8113	424.5	0.5	132.9	131.4	3.7	1.6	20.1	78.3	3.0	2.1	75.8	69.6	62.7
Berkshire, Buckinghamshire and Oxfordshire	2122	369.7	0.6	173.8	146.9	4.6	1.2	19.5	79.2	:	:	78.0	72.0	66.9
Surrey, East and West Sussex	2579	472.2	0.4	130.4	136.3	3.2	2.0	18.5	79.6	:	:	75.5	68.6	62.6
Hampshire and Isle of Wight	1802	431.8	0.5	118.3	117.6	3.7	1.3	22.4	76.3	:	:	75.0	69.0	58.3

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
7.5	**7.4**	**21.9**	**15.4**	**17.8**	**65.0**	**17.2**	**16.5**	**54.3**	**29.2**	**0.93**	**Sverige**
6.7	6.1	21.6	13.0	18.4	67.5	14.0	12.8	49.9	37.3	1.00	Stockholm
8.1	8.0	22.3	20.5	17.9	64.8	17.3	17.0	55.3	27.7	0.89	Östra Mellansverige
8.5	8.8	23.3	17.3	17.5	64.7	17.8	17.7	52.9	29.4	0.89	Sydsverige
8.7	8.5	23.9	16.3	17.0	63.2	19.8	18.9	58.1	23.0	0.80	Norra Mellansverige
8.2	6.5	21.8	14.4	16.7	63.2	20.1	17.1	58.0	24.9	0.80	Mellersta Norrland
8.7	8.3	23.4	13.7	17.2	64.7	18.1	12.7	59.1	28.2	0.85	Övre Norrland
5.9	6.2	18.5	14.8	17.8	63.3	18.9	20.1	56.6	23.2	0.86	Småland med öarna
6.8	7.2	21.3	12.1	18.1	64.8	17.1	17.7	54.2	28.1	0.98	Västsverige
4.7	**4.3**	**12.8**	**21.1**	**18.2**	**65.8**	**16.0**	**14.8**	**55.6**	**29.6**	**0.79**	**United Kingdom**
6.1	4.9	15.9	22.7	18.1	65.2	16.7	16.2	60.2	23.7	0.66	North East
6.0	4.5	15.6	24.1	18.5	65.2	16.3	17.6	58.7	23.7	0.64	Tees Valley and Durham
6.1	5.2	16.2	21.7	17.7	65.3	17.0	15.0	61.3	23.6	0.67	Northumberland and Tyne and Wear
4.5	4.1	12.5	20.6	19.0	65.0	16.0	16.4	56.5	27.1	0.74	North West
3.8	3.2	7.1	22.4	17.4	64.1	18.5	12.2	61.2	26.6	0.79	Cumbria
3.3	2.4	11.1	16.3	18.6	65.4	16.0	12.9	54.6	32.4	0.86	Cheshire
4.8	4.9	12.6	20.3	19.4	65.7	14.9	16.8	56.8	26.4	0.74	Greater Manchester
4.3	3.7	12.7	15.3	19.1	64.3	16.7	15.7	56.6	27.7	0.71	Lancashire
5.6	4.6	15.1	26.9	18.8	64.5	16.8	20.9	55.3	23.8	0.65	Merseyside
5.4	5.1	13.3	16.6	18.8	65.0	16.2	16.2	58.7	25.1	0.73	Yorkshire and the Humber
5.4	5.1	14.1	23.7	18.8	64.1	17.2	15.9	63.4	20.7	0.68	East Riding and North Lincolnshire
2.9	2.8	8.7	19.6	17.3	64.6	18.0	13.4	55.6	31.0	0.78	North Yorkshire
5.3	4.5	15.3	15.3	18.6	65.2	16.3	17.5	60.8	21.7	0.67	South Yorkshire
4.6	3.9	13.4	13.5	19.6	65.4	15.1	16.4	56.7	26.9	0.77	West Yorkshire
4.3	3.8	11.5	23.6	18.5	65.4	16.1	15.7	57.8	26.5	0.79	East Midlands
4.3	3.7	10.9	26.3	18.3	65.5	16.3	16.0	57.6	26.4	0.75	Derbyshire and Nottinghamshire
4.6	3.8	13.0	20.1	19.1	66.1	14.8	15.9	56.3	27.8	0.84	Leicestershire, Rutland and Northamptonshire
3.3	4.2	9.6	25.0	17.6	63.4	18.9	14.3	62.1	23.7	0.79	Lincolnshire
4.6	4.2	12.4	18.9	19.1	64.8	16.0	17.6	56.2	26.2	0.74	West Midlands
2.6	2.3	7.8	13.8	18.0	65.1	16.9	14.3	55.1	30.6	0.83	Herefordshire, Worcestershire and Warwickshire
3.6	3.8	9.2	13.2	18.4	65.6	16.1	16.6	58.0	25.4	0.72	Shropshire and Staffordshire
6.3	5.5	16.2	22.2	20.1	64.3	15.6	19.8	55.8	24.4	0.71	West Midlands
4.0	3.9	10.8	16.9	18.7	64.8	16.6	12.9	59.2	27.9	0.88	East of England
4.1	4.1	10.7	19.3	17.8	64.3	17.9	13.1	59.6	27.2	0.87	East Anglia
3.8	3.7	10.5	17.0	19.7	65.7	14.6	11.3	55.8	33.0	0.92	Bedfordshire and Hertfordshire
3.8	3.9	11.2	13.3	18.8	64.5	16.8	14.2	62.0	23.8	0.87	Essex
6.9	6.4	19.7	26.4	18.4	69.5	12.1	14.7	48.6	36.7	0.75	London
7.8	7.4	21.8	33.0	17.6	72.6	9.8	16.9	41.4	41.7	0.69	Inner London
6.5	5.8	18.6	21.6	18.9	67.5	13.6	13.2	53.4	33.5	0.76	Outer London
3.8	3.7	10.6	15.0	18.5	65.1	16.4	10.3	56.4	33.3	0.91	South East
3.5	3.5	10.8	15.1	19.2	67.3	13.5	9.5	53.8	36.7	0.95	Berkshire, Buckinghamshire and Oxfordshire
3.7	3.8	9.5	15.0	17.7	63.6	18.7	8.9	54.1	37.1	0.92	Surrey, East and West Sussex
3.9	3.5	11.3	13.0	18.1	65.4	16.5	10.8	59.1	30.0	0.87	Hampshire and Isle of Wight

Main regional indicators

	Population			Economy								Labour market		
							Employment by sector (% of total employment), 2005					Employment rate (%), 2005		
	Total population (1000 inh.), 2004	Population density (inh./km²), 2004	Population growth (average annual % change), 1995-2004	GDP/head in PPS (Index, EU27=100), 2004	GDP/person employed, in Euro (Index, EU27=100), 2004	GDP growth (average annual % change), 1995-2004	Agriculture	Industry	Services	R&D expenditure (% of GDP), 2004	R&D expenditure in the business enterprise sector (% of GDP), 2004	Ages 15-64	Female 15-64	Ages 55-64
Kent	1610	431.0	0.5	99.2	112.7	2.6	1.7	20.9	77.4	:	:	74.3	68.6	62.9
South West	5034	210.0	0.6	116.1	119.2	3.5	2.0	22.5	75.6	1.9	1.6	75.5	69.8	60.4
Gloucestershire, Wiltshire and North Somerset	2205	290.0	0.5	143.4	130.7	4.3	1.1	23.7	75.2	:	:	77.9	72.6	64.1
Dorset and Somerset	1212	198.5	0.6	99.5	113.1	2.8	2.6	22.5	74.9	:	:	74.6	69.3	57.4
Cornwall and Isles of Scilly	517	145.2	0.9	79.2	91.8	4.1	2.5	21.0	76.4	:	:	72.3	66.1	54.7
Devon	1100	164.1	0.5	97.0	110.7	2.0	2.9	20.5	76.7	:	:	73.2	66.3	60.1
Wales	2949	142.0	0.2	95.8	115.7	2.0	2.4	22.8	74.7	1.1	0.6	68.3	64.3	48.4
West Wales and The Valleys	1873	142.8	0.1	80.3	107.9	1.3	2.6	23.0	74.4	:	:	66.4	63.2	45.2
East Wales	1076	140.7	0.5	122.9	125.9	2.9	2.2	22.6	75.3	:	:	71.4	66.1	53.9
Scotland	5075	65.0	-0.0	117.5	119.7	1.9	1.7	22.6	75.7	1.3	0.6	72.0	66.8	54.6
North Eastern Scotland	502	68.4	-0.1	153.9	142.0	1.3	3.2	34.6	62.3	:	:	76.8	70.2	64.3
Eastern Scotland	1920	106.8	0.3	120.6	117.6	2.1	1.9	20.6	77.5	:	:	73.4	68.2	58.0
South Western Scotland	2281	175.0	-0.3	111.4	120.2	1.9	0.9	21.3	77.7	:	:	69.4	64.6	49.8
Highlands and Islands	372	9.4	0.1	90.0	90.4	2.3	2.5	24.1	73.4	:	:	73.4	68.1	52.5
Northern Ireland	1711	120.8	0.5	99.0	115.4	3.0	4.4	24.1	71.5	0.8	0.5	66.0	59.4	48.2

Sources: Eurostat, NSI, DG REGIO
GDP/person employed: IE: 2003; UK: 2001
GDP growth: BG: 1996-2004; IE: 1995-2003
R&D expenditure: BE, BG, DE, EL, FR, IT, NL, PT, SE: 2003; UK: 1999
R&D expenditure in the business enterprise sector: BE, BG, DE, EL, FR, IT, NL, PT, SE: 2003
Age structure of population: UK: 2003

Labour market				Age structure			Education			Economic Lisbon Indicators (average of re-scaled values relative to the EU27 mean), 2004-2005	Region
Unemployment rate (%), 2005				% of the population aged:, 2004			Educational attainment of persons aged 25-64 (% of total), 2005				
Total	Female	Young (15-24)	Long-term unemployment (% of total unemployment)	< 15	15 - 64	65 +	Low	Medium	High		
4.2	4.3	10.9	17.1	19.3	64.2	16.5	13.0	60.9	26.1	0.84	Kent
3.6	3.4	10.1	16.2	17.6	63.7	18.7	10.4	59.7	29.9	0.83	South West
3.5	3.1	10.7	15.0	18.3	65.3	16.4	10.3	55.5	34.2	0.87	Gloucestershire, Wiltshire and North Somerset
3.5	3.1	7.5	17.2	17.1	61.8	21.1	11.6	60.0	28.4	0.80	Dorset and Somerset
3.4	2.4	7.5	15.6	17.1	62.7	20.2	9.3	68.2	22.5	0.77	Cornwall and Isles of Scilly
3.8	4.7	11.7	18.1	16.9	63.0	20.1	9.9	64.4	25.7	0.79	Devon
4.5	3.4	12.9	22.0	18.6	64.0	17.4	18.8	54.2	26.9	0.69	Wales
5.1	4.0	14.9	21.8	18.4	63.4	18.2	20.7	55.2	24.2	0.63	West Wales and The Valleys
3.5	2.5	9.8	22.4	19.0	64.9	16.1	15.7	52.7	31.5	0.77	East Wales
5.3	4.7	13.1	22.6	17.6	66.3	16.1	15.5	51.2	33.3	0.75	Scotland
3.9	4.4	:	18.8	17.7	67.3	15.0	13.1	51.6	35.3	0.87	North Eastern Scotland
5.0	4.6	12.8	18.0	17.3	66.4	16.3	12.2	51.2	36.5	0.79	Eastern Scotland
6.3	5.2	14.5	27.0	17.8	66.3	15.9	19.4	49.8	30.8	0.68	South Western Scotland
3.7	3.9	:	20.4	17.9	64.8	17.3	13.9	55.8	30.3	0.74	Highlands and Islands
4.7	3.4	11.1	40.7	21.6	65.0	13.4	25.7	47.8	26.5	0.62	Northern Ireland