

Eurostat regional yearbook 2008



Eurostat regional yearbook 2008

*Europe Direct is a service to help you find answers
to your questions about the European Union*

Freephone number (*):

00 800 6 7 8 9 10 11

(* Certain mobile telephone operators do not allow access
to 00 800 numbers or these calls may be billed.

More information on the European Union is available on the Internet (<http://europa.eu>).

Luxembourg: Office for Official Publications of the European Communities, 2008

ISBN 978-92-79-08212-2

ISSN 1830-9674

DOI 10.2785/11820

Cat. No. KS-HA-08-001-EN-N

(Cat. No. printed publication KS-HA-08-001-EN-C)

Theme: General and regional statistics

Collection: Statistical books

© European Communities, 2008

© Copyright for the following photos: cover and the Introduction, Population, Urban statistics
Household accounts, Structural business statistics, Labour market, Sectoral productivity and Tourism
chapters: © Phovoir.com; the chapters Gross domestic product, Labour costs, Transport and Science,
technology and innovation: © the Digital Photo Library of the Regional Policy DG of the European
Commission; the chapter Health: © Fotolito38 and the chapter Agriculture: © Jean-Jacques Patricola.

For reproduction or use of these photos, permission must be sought directly from the copyright holder.



Preface

Dear reader,

I am pleased to present the 2008 edition of the Eurostat regional yearbook, which gives an overview of the most recent developments in the regions of the European Union, with its current 27 Member States, as well as in the candidate countries and EFTA countries.

We have again selected themes that we think will show you the most interesting facets of development in the economic, social and demographic fields in Europe's regions. We are also pleased to include a contribution from our colleagues at the Commission's Directorate-General for Regional Policy for the second year running. This time the chapter is about 'Sectoral productivity' and it examines how productivity in different business sectors differs between the EU's regions.

Regional policy programmes initiated last year under the EU's new cohesion policy are now well under way and we hope that this publication will give some flavour of the progress being made in regional cohesion throughout the EU. We have also included some of the most recent results from the Urban Audit exercise, a data collection that compiles a great deal of statistical information on Europe's cities.

We are progressively developing the range of regional indicators available and will hopefully be able to include these in our choice of topics in future editions, as data availability and quality allow.

I wish you a stimulating read.



Hervé Carré
Director-General, Eurostat



Acknowledgements

The editors of the *Eurostat regional yearbook 2008* would like to thank all those who were involved in its preparation. We thank in particular the following chapter authors for making publication of this year's edition possible.

- **Population:** Gregor Kyi (Unit F.1 at Eurostat: Demographic and migration statistics)
- **Urban statistics:** Teodóra Brandmüller (Unit D.2 at Eurostat: Regional indicators and geographical information)
- **Gross domestic product:** Andreas Krüger (Unit C.2 at Eurostat: National accounts — production)
- **Household accounts:** Andreas Krüger (Unit C.2 at Eurostat: National accounts — production)
- **Structural business statistics:** Ulf Johansson (Unit G.1 at Eurostat: Structural business statistics)
- **Labour market:** Pedro Ferreira (Unit D.2 at Eurostat: Regional indicators and geographical information)
- **Sectoral productivity:** Zuzana Gáková (Unit C.3 at the Directorate-General for Regional Policy: Economic and Quantitative Analysis, Additionality)
- **Labour costs:** Simone Casali (Unit F.2 at Eurostat: Labour market statistics)
- **Transport:** Anna Bialas-Motyl and Anastassia Vakalopoulou (Unit G.5 at Eurostat: Transport statistics)
- **Tourism:** Ulrich Spörel (Unit F.6 at Eurostat: Information society and tourism statistics)
- **Science, technology and innovation:** Bernard Felix and Tomas Meri (Unit F4 at Eurostat: Education, science and culture statistics)
- **Health:** Tomasz Urbanski (Unit F.5 at Eurostat: Health and food safety statistics)
- **Agriculture:** Garry Mahon (Unit E.2 at Eurostat: Agricultural and fisheries statistics)

This publication was edited and coordinated by Åsa Önnersfors (Unit D.2 at Eurostat: Regional indicators and geographical information) with the help of Pavel Bořkovec (Unit B.6 at Eurostat: Dissemination). Baudouin Quennery (Unit D.2) produced all the statistical maps.

We are also very grateful to:

- the **Directorate-General for Translation of the European Commission**, and in particular the German, English and French translation units;
- the **Office for Official Publications of the European Communities**, and in particular Peter Johansson in Unit B.1, Cross-media publishing, and the proofreaders in Unit B.2, Editorial services.



Contents

INTRODUCTION	9
Regional statistics give more detailed information	10
The NUTS classification	10
Coverage	11
More regional information	11
1 POPULATION	13
Revealing the regional pattern of demography	14
The drivers behind population change	14
Demographic ageing: the situation today... ..	17
... and its impact in the future	21
<i>Methodological notes</i>	22
2 URBAN STATISTICS	25
Introduction	26
What makes the Urban Audit unique?	26
Wide choice of indicators	26
Large geographical coverage	26
More than a decade-long time series	26
Attractiveness of cities	28
Conclusion	35
3 GROSS DOMESTIC PRODUCT	37
What is regional gross domestic product?	38
Regional GDP in 2005	38
Three-year average GDP over the period 2003–05	40
Major regional differences even within countries	40
Dynamic catch-up process in the new Member States	42
Different trends within the countries	45
Convergence makes progress	45
Conclusion	48
<i>Methodological notes</i>	48
<i>Purchasing power parities and international volume comparisons</i>	48
<i>Dispersion of regional per-inhabitant GDP</i>	49
4 HOUSEHOLD ACCOUNTS	51
Introduction: Measuring wealth	52
Private household income	52
Results for 2005	52
Primary income	52
Disposable income	53
Dynamic development on the edge of the Union	58
Conclusion	58
<i>Methodological notes</i>	61



5 STRUCTURAL BUSINESS STATISTICS	63
Introduction	64
Regional specialisation and business concentration	64
Focus on chemicals manufacturing	71
Conclusion	74
<i>Methodological notes</i>	78
6 LABOUR MARKET	81
Regional labour market cohesion	82
Employment	82
Unemployment	85
Long-term unemployment	85
Disparities in regional labour markets	89
Conclusion	92
<i>Methodological notes</i>	93
<i>Definitions</i>	93
7 SECTORAL PRODUCTIVITY	95
Introduction	96
The top sectors	96
Productivity at regional level	97
How has sectoral productivity developed in recent years?	100
Productivity grows when GVA increases... ..	100
... or when employment decreases	101
Manufacturing vs knowledge economy	105
Conclusion	107
<i>Methodological notes</i>	109
8 LABOUR COSTS	111
Introduction	112
Hourly labour costs	112
Hours actually worked	112
Structure of labour costs	115
Conclusion	117
<i>Methodological notes</i>	118
<i>Definitions</i>	118
<i>Labour costs</i>	118
<i>Hours worked</i>	118
<i>Full-time equivalents</i>	119
<i>Employers' actual social contributions (excluding apprentices)</i>	119
9 TRANSPORT	121
Introduction	122
Transport infrastructure	122
Road safety	127
Air transport	128
Conclusion	130
<i>Methodological notes</i>	135



10 TOURISM	137
Introduction	138
Accommodation capacity	138
Visitor arrivals	139
Overnight stays	141
Tourism intensity	143
Trends in tourism 2000–06	143
Inbound tourism	146
Camping tourism	146
Future prospects	146
<i>Methodological notes</i>	149
11 SCIENCE, TECHNOLOGY AND INNOVATION	151
Introduction	152
Human resources in science and technology	152
High-technology industries and knowledge-intensive services	152
Patents	154
High regional concentration of high-tech patenting	157
Conclusion	157
<i>Methodological notes</i>	159
12 HEALTH	161
Introduction	162
Causes of death	162
Colorectal cancer	162
Transport accidents	165
Healthcare staff	165
Conclusion	169
<i>Methodological notes</i>	170
13 AGRICULTURE	173
Introduction	174
Animal-rearing in Europe's regions	174
Pigs	174
Sheep	174
Cattle	180
Milk production	180
Conclusion	180
<i>Methodological notes</i>	182
ANNEX	183
EUROPEAN UNION: NUTS 2 regions	183
CANDIDATE COUNTRIES: Statistical regions at level 2	186
EFTA COUNTRIES: Statistical regions at level 2	187



Introduction





Regional statistics give more detailed information

Eurostat, the statistical office of the European Communities, collects data on a range of different statistical topics, mainly from the 27 Member States of the European Union, but also from the three candidate countries (Croatia, the former Yugoslav Republic of Macedonia, and Turkey) and from the four EFTA countries (Iceland, Liechtenstein, Norway and Switzerland). The statistical data are often only collected at national level, but very many statistical fields also have statistics at regional level, which gives us a more complete picture.

This aim of this publication, the *Eurostat regional yearbook 2008*, is to give you detailed information on life in the European regions today. Looking at the regions of Europe under the magnifying glass allows the authors of the 13 different chapters to make an in-depth analysis of a large variety of statistical domains. We very much hope you will enjoy reading it!

The first chapter is about population statistics (demography), because population data form the basis for all other statistics. Many other statistical indicators are divided by the population figures, thus resulting in data with the unit expressed in terms of 'per inhabitant'. Therefore, we start the first chapter by presenting some basic facts about how the population is spread over the regions in Europe, providing birth and death rates, migration patterns and age distribution.

The second chapter, on urban statistics, is based on the Urban Audit data collection and it presents data on a range of different topics from all European capitals and from many other large European cities. As a large proportion of EU citizens live in these cities, it should be a topic that is interesting and directly relevant for many people.

The other chapters can be divided into four different themes.

The first concerns economic or financial indicators: gross domestic product (GDP), household accounts and structural business statistics. Economic cohesion is one of the main goals in EU policy and, one might say, the engine for all other policies. In particular the chapter on GDP gives a very good idea of the situation in the European Union today.

Labour market indicators form the second group of themes in this publication, containing a basic chapter on the labour market, and also introduc-

ing two totally new subjects for the *Eurostat regional yearbook*; sectoral productivity, written by a subject specialist from the Directorate-General for Regional Policy, and labour costs, where the regional differences in labour costs per hour are analysed.

The theme for the third group of chapters is more general and concerns the everyday life of most European citizens. Transport and tourism both focus on the mobility of people, while science, technology and innovation is often seen as one of the main cornerstones in the new Lisbon strategy for growth and jobs.

Well-being in general is the theme for the last two chapters; statistics on health are a welcome reappearance this year, focusing on the main causes of death and on the density of healthcare staff in the European regions; the chapter on agriculture this year concerns animal-rearing, mainly regarding pigs, sheep and cows.

The NUTS classification

All statistics at regional level within the EU are based on the nomenclature of territorial units for statistics (NUTS). The NUTS classification has been used for regional statistics for many decades, and has always formed the basis for regional funding policy. It was only in 2003, though, that NUTS acquired a legal basis, when the NUTS regulation was adopted by the Parliament and the Council ⁽¹⁾.

Whenever new Member States join the EU, the NUTS regulation is of course amended to include the regional classification in those countries. This was the case in 2004, when the EU took in 10 new Member States, and in 2007 when it expanded to include Bulgaria and Romania.

The NUTS regulation provides for a review to be conducted every three years whereby the regional classification can be changed and adapted to new administrative boundaries or economic circumstances. In 2006, this exercise took place for the first time, and the results of these changes to the NUTS classification have now been valid since 1 January 2008. Most territorial changes are at NUTS level 3, affecting 11 countries, while four countries had changes made at NUTS level 2 and only one country at NUTS level 1.

The main changes in this latest revision of the NUTS classification are the following: Denmark introduced new NUTS 2 regions and revised the existing NUTS 3 regions following a substantial

⁽¹⁾ More information on the NUTS classification can be found on the Internet (http://ec.europa.eu/eurostat/ramon/nuts/splash_regions.html).



administrative regional reform. In one German region, Sachsen-Anhalt, three different NUTS 2 regions were merged into just one NUTS 2 region. Slovenia introduced two new NUTS 2 regions where it had only one previously. In the United Kingdom, more specifically in north-eastern Scotland, a boundary shift at both NUTS 2 and 3 levels had the effect of creating new regions. Sweden introduced NUTS 1 regions for the first time due to the size of the country. For more detailed information on the most recent NUTS changes, please consult the Eurostat website.

Since these NUTS changes were introduced only on 1 January 2008 and the statistical data for all the chapters had already been extracted by the beginning of this year, you will find that regional data, especially for Denmark and Slovenia, are missing or have been replaced with national values on many of the statistical maps. The regional data availability for these two countries will have hopefully improved for next year's publication.

As a rule regional data by NUTS 2 regions are displayed and analysed in the *Eurostat regional yearbook 2008*, but there is one exception. Regarding labour costs, Eurostat only collects data at NUTS level 1 and therefore in that chapter the data are based on NUTS 1 regions instead.

Please note that some of the Member States have a relatively small population and they are therefore not divided into more than one NUTS 2 region. Thus, for these countries the NUTS 2 value is exactly the same as the national value. Following the latest revision of the NUTS classification this now applies to six Member States (Estonia, Cyprus, Latvia, Lithuania, Luxembourg and Malta), one candidate country (the former Yugoslav Republic of Macedonia), and two EFTA countries (Iceland and Liechtenstein): in all these cases the whole country consists of one single NUTS 2 region.

A folding map accompanies this publication on the inside of the cover and it shows all the regions at NUTS level 2 in the 27 Member States of the European Union (EU-27) and the corresponding statistical regions at level 2 in the candidate and EFTA countries. In the annex you will find the

full list of codes and names of these regions. This will help you to locate a specific region geographically on the map.

Coverage

The *Eurostat regional yearbook 2008* mainly contains statistics from the 27 Member States of the European Union, but when available also from the three candidate countries: Croatia, the former Yugoslav Republic of Macedonia, and Turkey; and from the four EFTA countries: Iceland, Liechtenstein, Norway and Switzerland.

Regions in the candidate countries and the EFTA countries are called statistical regions and they follow the same rules as the NUTS regions in the European Union, except that there is no legal base. Data from the candidate and EFTA countries are not yet available in the Eurostat database for some policy areas, but the data availability situation is constantly improving, and we hope to have even better coverage in the near future.

More regional information

Under the theme 'General and regional statistics' on the Eurostat website you will find tables with statistics on both 'Regions' and the 'Urban Audit' with more detailed time series (some of them going back as far as 1970) and with more detailed statistics than contained in this yearbook. You will also find a number of indicators at NUTS level 3 (such as area, demography, gross domestic product and labour market data). This is important since some of the countries covered are not divided into NUTS 2 regions, as mentioned above.

For more detailed information on the contents of the regional and urban databases please consult the Eurostat publication *European regional and urban statistics — Reference guide — 2008 edition*, which you can download free of charge from the Eurostat website. The specific data used for producing the maps and other illustrations in this publication can also be found as Excel tables on the Eurostat website.

Sectoral productivity



Introduction

The goal of this chapter is to address the differences between the regions of the EU in the productivity of the EU's most important sectors.

First of all, the relation of sectoral gross value added (GVA) to employment is analysed at national level. This leads to the selection of two sectors — real estate, renting and business activities, and manufacturing — which are the most important for the EU's productivity and employment. Regional data are then analysed to capture the levels of productivity in these sectors at regional level. The last section takes a look at how the sectors of GVA and employment have evolved in the last five years, again at regional level.

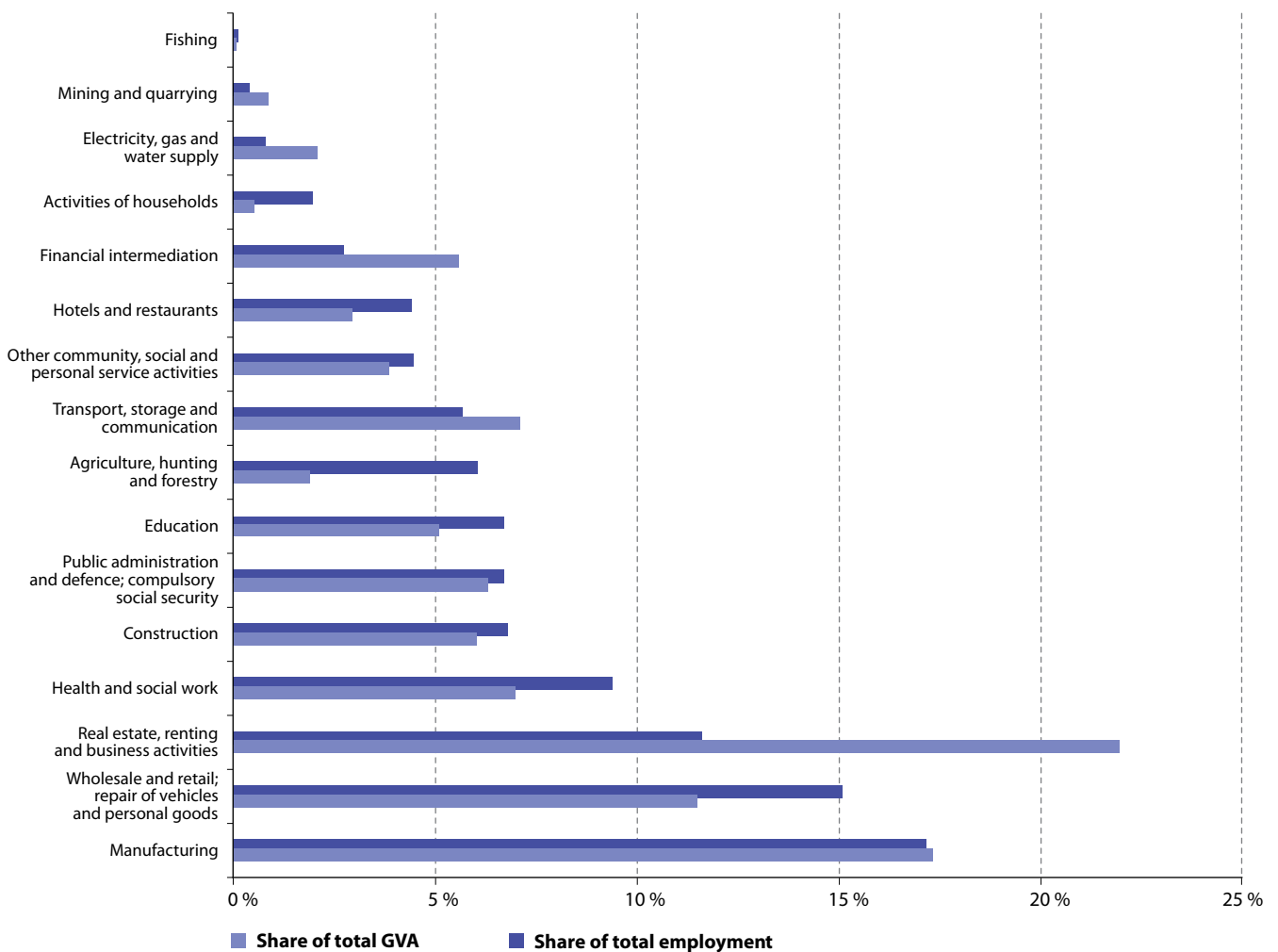
The conclusion sums up the findings and shows their implications for the European cohesion policy.

The top sectors

In 2005, the sector that generated the highest GVA was (NACE section K) real estate, renting and business activities. It contributed more than a fifth of the total GVA created in the EU-27 and it had a share of 12 % of total employment, which is the third highest in the EU. As a result, this sector had extremely high GVA per person employed, more than the double the average across all sectors (See Figure 7.1).

In terms of employment, the top sector in 2005 was (NACE section D) manufacturing. It accounted for 17 % of total EU-27 employment, or 37 million jobs. Manufacturing contributes approximately the same share to total GVA (17 %) as to total employment. Hence, its GVA per person employed is close to the average for all sectors.

Figure 7.1: Share of total GVA and employment in 16 sectors, 2005
Percentage



The second most important sector in terms of employment — wholesale and retail trade — covers 15 % of employment. This sector's share of GVA, at 11 %, is considerably lower than its share in employment, leading to GVA per person employed of 75 % of the average for all sectors.

Thus, the two sectors of real estate, renting and business activities and manufacturing are currently the most important sectors for the growth of the EU economy and its level of employment, respectively. This, and the changes that they have experienced in recent years, makes them the perfect candidate to show how sectoral productivity develops in the European Union, Norway, Switzerland and Croatia.

The real estate, renting and business activities sector (NACE section K) is rather diverse and includes five distinct sub-sectors (NACE divisions):

- 70 — Real estate activities
- 71 — Renting of machinery and equipment
- 72 — Computer and related activities
- 73 — Research and development
- 74 — Other business activities (such as accounting, market research, management consultancy, architecture, advertising and technical testing)

There are no GVA data available for these five sub-sectors, but the labour force survey can be used to estimate the share of employment in these sub-sectors. Other business activities (Division 74) is the most important, accounting for approximately 70 % of employment in this sector.

The manufacturing sector consists of 14 sub-sectors (See Figure 7.3).

Productivity at regional level

While GVA and employment data at national and EU level are available for more detailed industry categories, the data available at regional level limit the detail to six sectors.

Real estate, renting and business activities are part of the wider financial intermediation and business sector (NACE sections J and K), together with the financial intermediation sector (J). In 2005, real estate, renting and business activities accounted for more than 80 % of total employment and nearly the same share of total GVA of the EU's financial intermediation and business sector.

The manufacturing sector had an even higher share of total GVA and total employment in its group, total industry (NACE sections C, D and E), at 87 % and 95 % respectively.

Thus, analysing the productivity of the financial intermediation and business sector and that of total industry can still give us a useful insight into the productivity levels and growth in the real estate, renting and business activities and manufacturing sectors at regional level.

Map 7.1 shows the regional variation in the productivity of the financial intermediation and business sector. The patterns are visibly national, with clear distinctions between the 15 old and the 12 new EU Member States.

The productivity of the financial intermediation and business sector is above the EU average in 120 out of 179 regions (*) in the EU-15. The regions with the highest productivity are concentrated in Ireland, Luxembourg and France. The average productivity of the regions in these three countries is 45 % higher than the EU average. Of the non-EU members displayed on the map, Norway has the most productive financial intermediation and business sector, with productivity 80 % above the EU average.

In the EU-15, the 15 regions with the lowest productivity in financial intermediation and business are in north-eastern Germany (Leipzig, Sachsen-Anhalt, Dresden, Berlin, Thüringen and Mecklenburg-Vorpommern), the whole of Portugal, and Campania in southern Italy, followed by Comunidad de Madrid in Spain and Attiki in Greece. The latter have a level of GVA in the financial intermediation and business sector comparable with other capital regions, but the number of people working in the sector is much higher, which explains the low productivity.

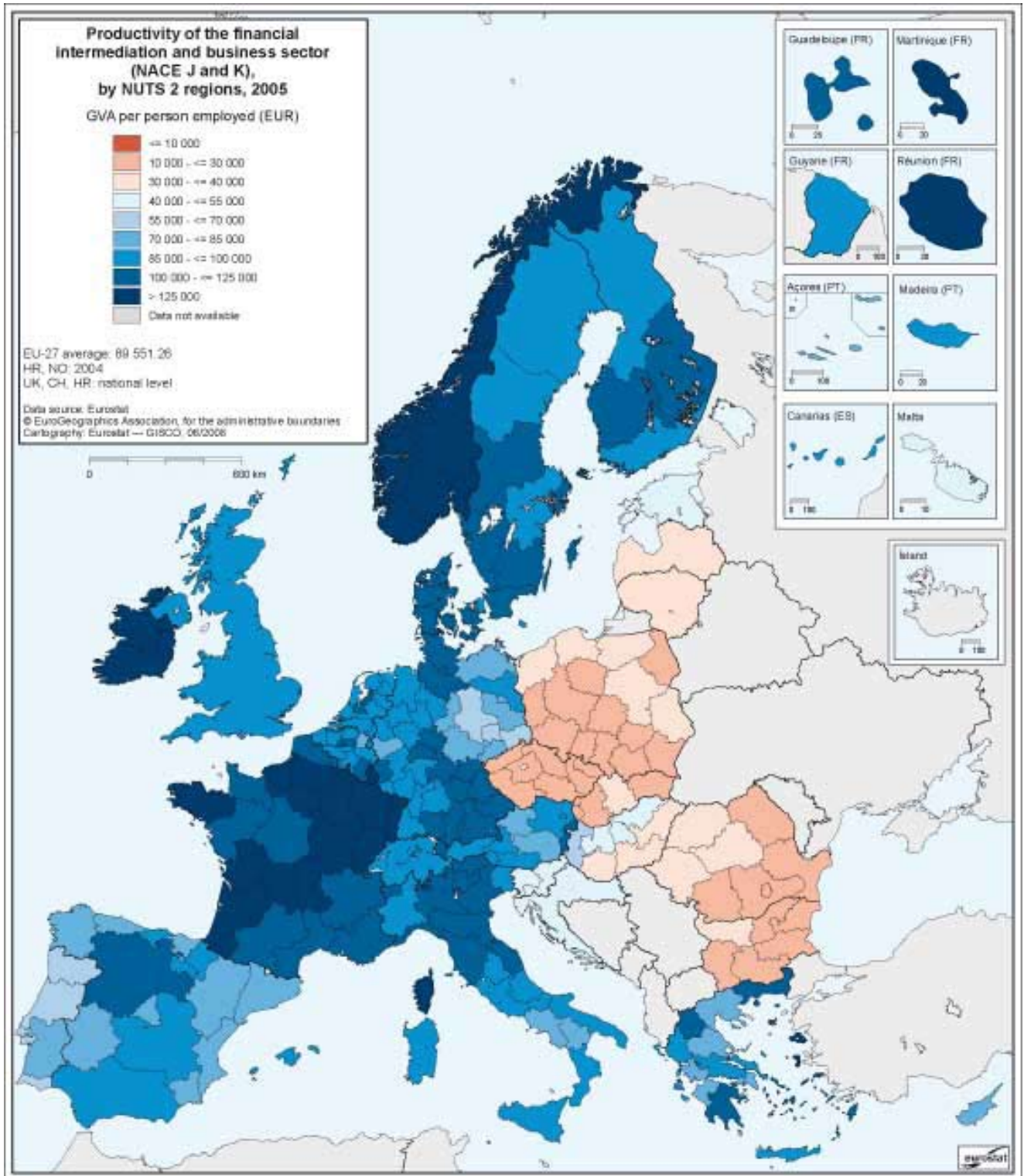
In contrast, the productivity in all of the 56 regions in the EU-12 is below the EU average, the sector's average productivity being only 35 % of the EU average. As can be seen in Map 7.1, the highest productivity is in Cyprus and Malta, followed by Slovenia, Estonia and the seven Hungarian regions.

The regions with the lowest productivity are all in Bulgaria, in the north of the Czech Republic, followed by the south and centre of the country, except for the region of Prague, and the eastern regions of Romania.

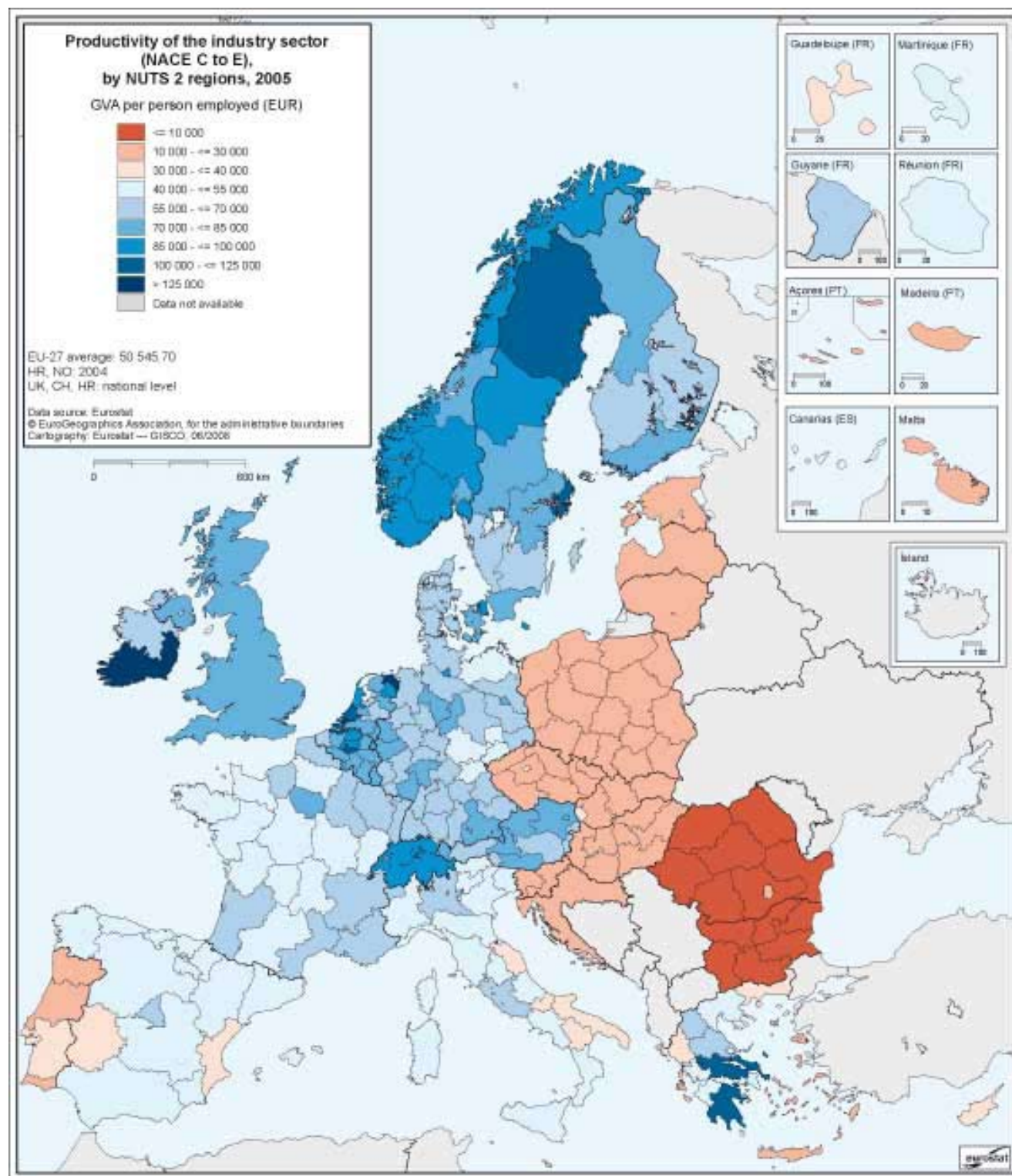
Map 7.2 on the productivity of total industry shows the same division between the old and the new Member States, a clear distinction between

(*) The UK is analysed at national level, due to lack of regional data. Normally, the total number of regions in the EU-15 would be 216, which makes 271 (NUTS 2) regions for the whole of the EU.

Map 7.1: Productivity of the financial intermediation and business sector (NACE J and K), by NUTS 2 regions, 2005
GVA per person employed (EUR)



Map 7.2: Productivity of the industry sector (NACE C to E), by NUTS 2 regions, 2005
GVA per person employed (EUR)



the EU-10 and Romania and Bulgaria, and more regional variation in the EU-15.

The number of regions with above-average productivity is 122, all in the EU-15. Groningen in the north of the Netherlands ranks the highest. The most productive regions include a further two Dutch regions, Zeeland and Zuid-Holland, and Southern and Eastern in Ireland, Brabant Wallon, Antwerpen and the capital region in Belgium, Sterea Ellada in Greece, the Övre Norrland in the north of Sweden, the regions of Stockholm and Hamburg.

Standing at half the EU average productivity, Portuguese industry has the lowest productivity among the old Member States, followed by the Iperios region in the north of Greece, the Greek islands, the Spanish Extremadura and Comunidad Valenciana, and the regions of southern Italy.

The level of productivity of total industry is three times lower in the EU-12 than in the EU-15. Cyprus is the region with the highest productivity. The other regions with relatively high productivity in total industry are the Slovak, Czech and Hungarian capital regions, the whole of Slovenia and Malta, followed by other Czech, Hungarian and Polish regions.

As shown in Map 7.2, Bulgaria and Romania have the lowest values for productivity in the sector.

The importance of the two sectors is visibly not the same for the old and the new Member States. Despite low productivity levels in the EU-12, the importance of the industry sector is higher than in the EU-15 (See Table 7.1).

While the industry sector in the EU-12 employs nearly a quarter of all employed people, it also accounts for a quarter of countries' total GVA. In the EU-15, it represents less than a fifth of total GVA and only 17 % of total employment.

The situation in the financial intermediation and business sector is the reverse. The sector's share of total GVA is only 18 % in the EU-12, but more

than a quarter in the EU-15. Finally, the number of people working in the sector in the EU-15 is twice as high as in the EU-12.

How has sectoral productivity developed in recent years?

As shown in Figure 7.2, the real estate, renting and business activities sector has generated one of the highest employment growths in the EU-27. It grew by nearly 3 % a year between 2000 and 2005. This has led to an increase in employment of 3.5 million jobs in this sector. In addition, GVA growth between 2000 and 2005 was also very strong, at 2.7 % a year. In short, this sector has generated very high employment and GVA growth in recent years and is clearly one of the EU's growth sectors.

The manufacturing sector, however, saw its total employment shrink between 2000 and 2005, at an average of -1.1 % a year or a loss of 2.3 million jobs. Manufacturing GVA grew by 0.8 % a year between 2000 and 2005, less than half of total GVA growth of 1.8 %.

Financial intermediation also had very high growth in GVA. The sector with the biggest increase in GVA, however, is transport, storage and communication, with an average annual increase of 3.1 %. Employment in transport, storage and communication, however, grew very little.

Productivity grows when GVA increases ...

To illustrate the growth in the regions of these sectors between 2000 and 2005, this section looks once more at the six-sector breakdown.

Map 7.3 shows the regional growth of GVA in the financial intermediation and business sector between 2000 and 2005. GVA growth in this sector was almost universally positive, with only a few exceptions: all regions in Slovakia, with the exception of the capital region, Severovýchod in

Table 7.1: GVA per person employed and sector share of total GVA, in the EU-15 and 12 new Member States (NMS), 2005
Percentage

Sector	GVA per person employed EU-27=100, 2005		Sector share of total GVA, 2005	
	EU-15	NMS	EU-15	NMS
Financial intermediation and business (NACE J and K)	208	68	28	18
Industry (NACE C – E)	140	33	19	26

the north-eastern part of the Czech Republic and a few regions in the Netherlands and Germany. Switzerland and Croatia experienced a contraction of GVA in this sector.

Moreover, 158 of the 236 EU regions displayed on the map had growth rates above the average for the sector, including the vast majority of the regions in the new Member States, with some Romanian regions growing at a rate of more than 10 % a year. Thus, despite low productivity levels in 2005, as shown above, GVA grew fast in the 12 new Member States, reaching an average rate of 3.8 %, double the average for the Member States of the former EU-15.

In contrast to the financial intermediation and business sector, the growth rate of GVA in total industry

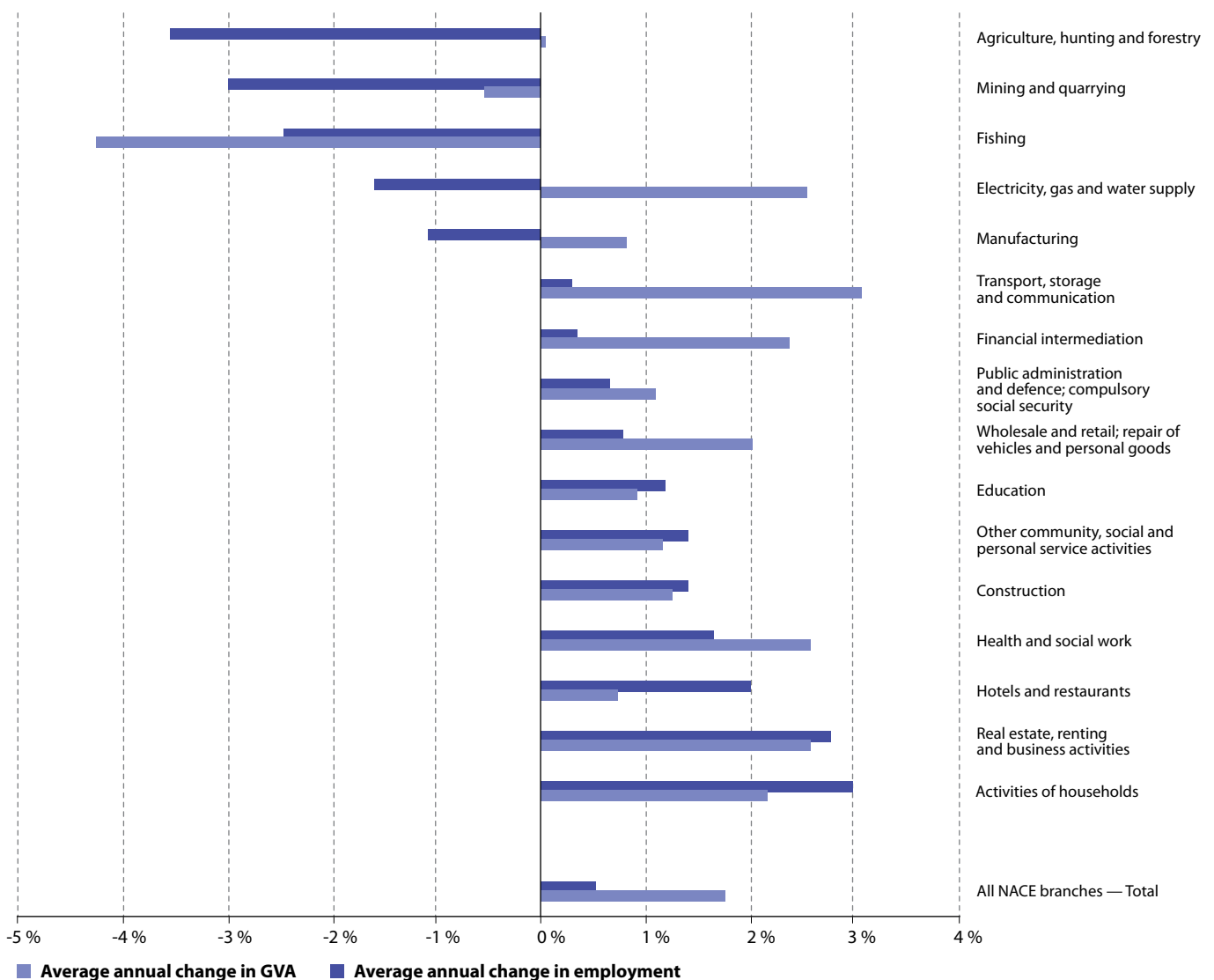
was less than half the total GVA growth rate at EU level. At regional level, however, growth in industry GVA trailed total GVA growth only in 50 out of 236 regions. This was the case for Italy, Denmark and the UK; the others were concentrated in Portugal, Belgium and the Netherlands (See Map 7.4).

In the new Member States, the growth of GVA in total industry, at 4 % a year against 0.7 % in the EU-15, is further evidence of its importance, as mentioned previously.

... or when employment decreases

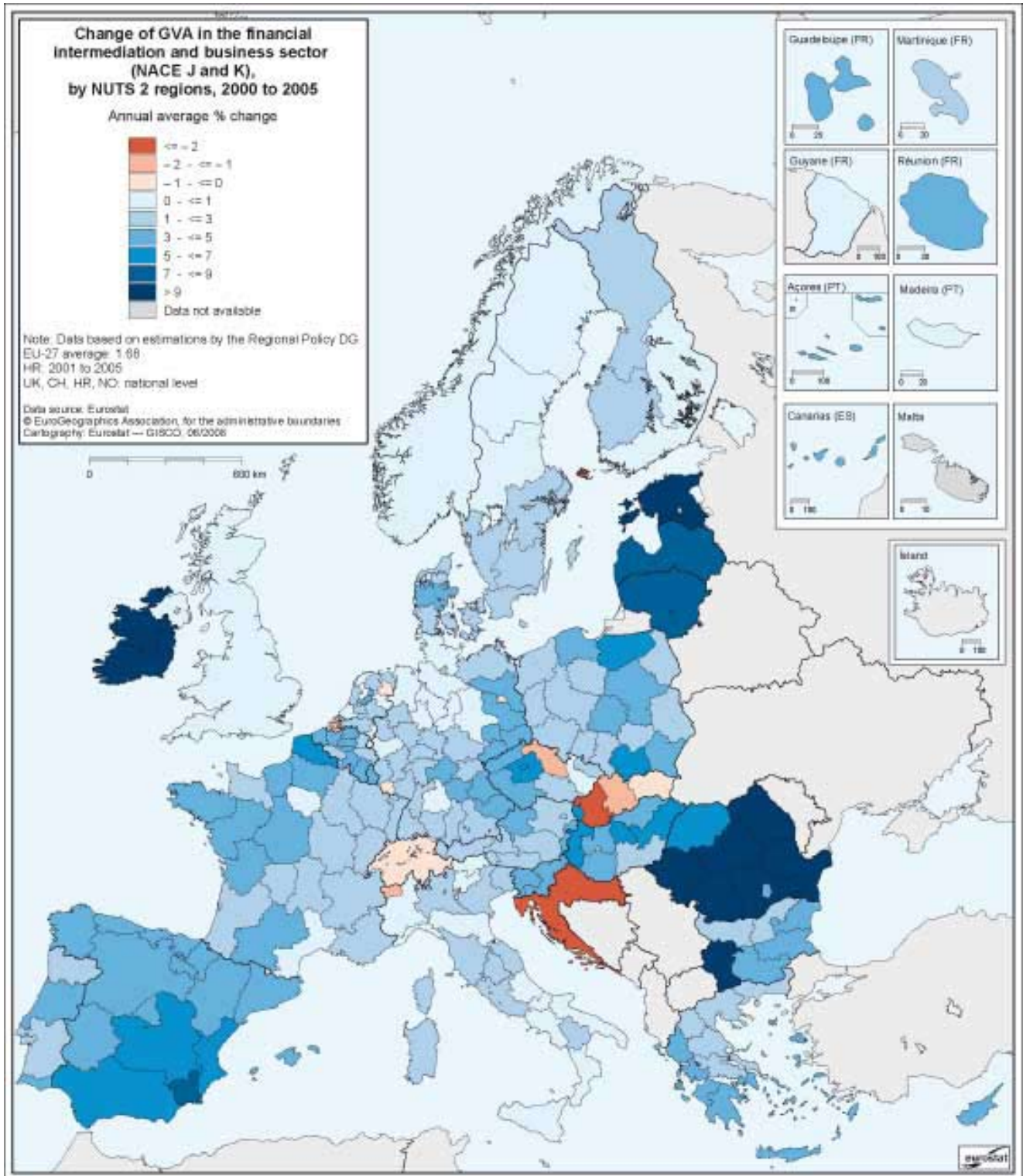
Map 7.5 shows a similar picture for the growth of employment in the financial intermediation and business sector to the growth of GVA.

Figure 7.2: Changes in GVA and employment in 16 sectors, 2000–05
Average annual change

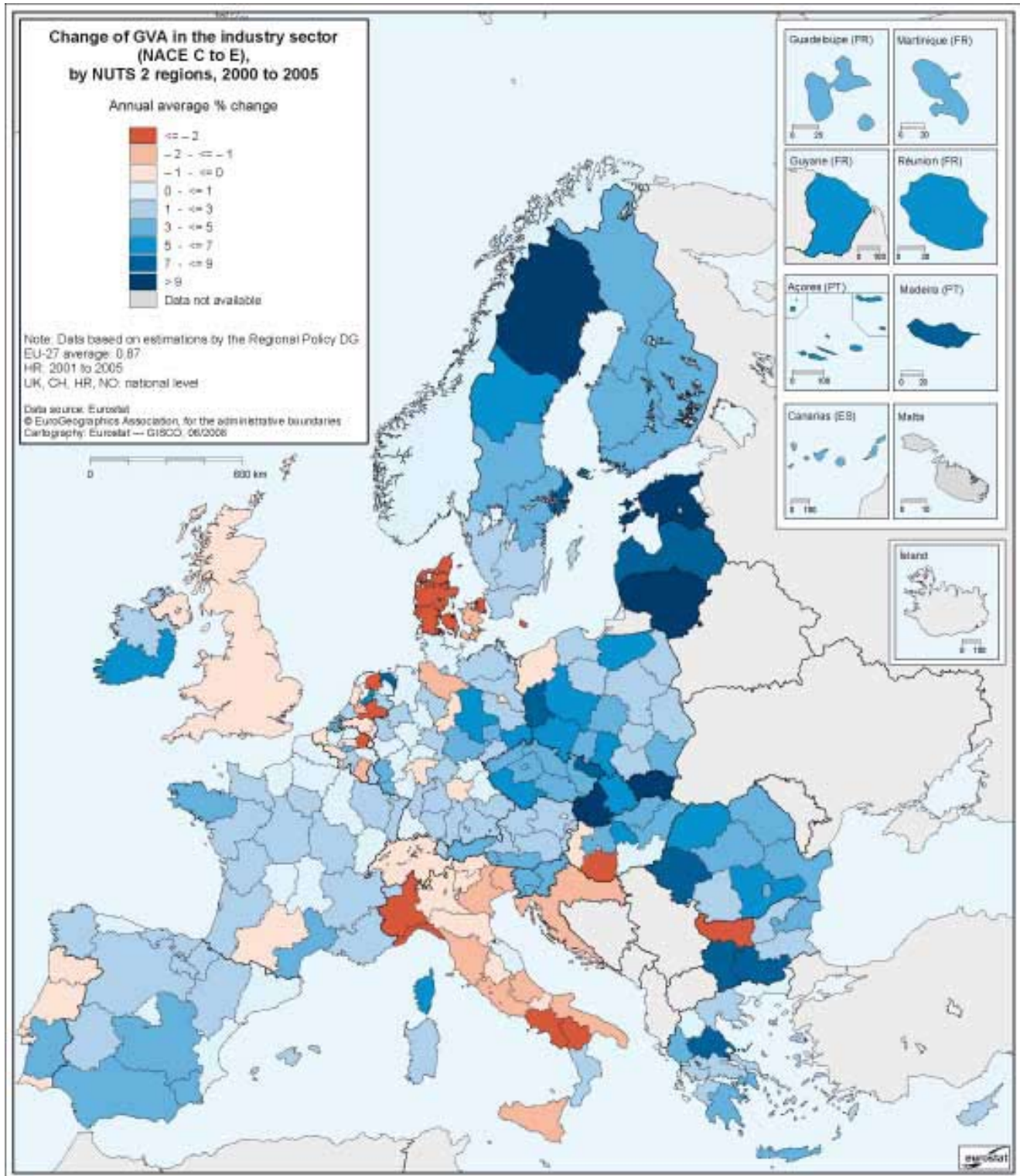




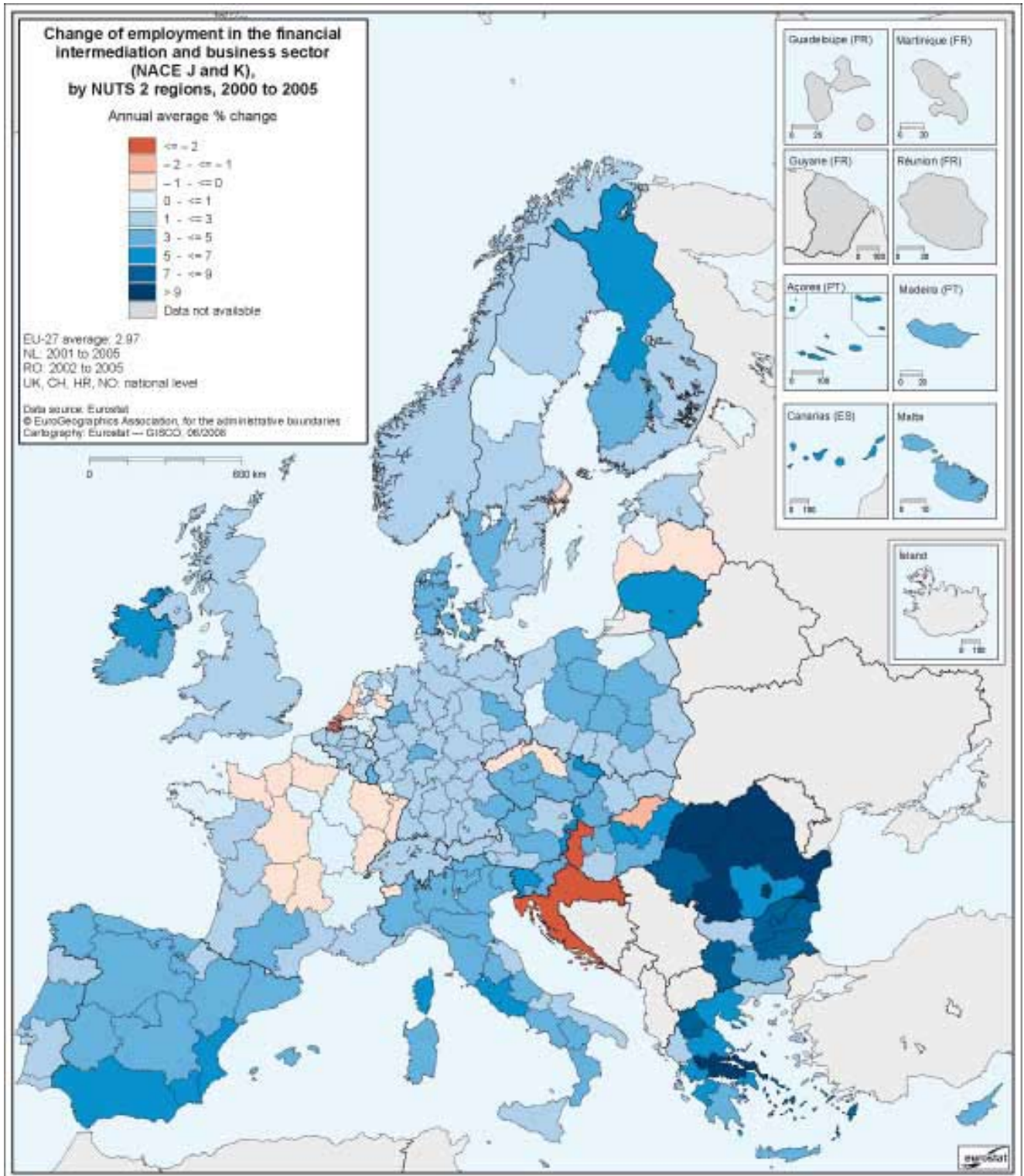
Map 7.3: Change of GVA in the financial intermediation and business sector (NACE J and K), by NUTS 2 regions, 2000 to 2005
Annual average % change



Map 7.4: Change of GVA in the industry sector (NACE C to E), by NUTS 2 regions, 2000 to 2005
Annual average % change



Map 7.5: Change of employment in the financial intermediation and business sector (NACE J and K), by NUTS 2 regions, 2000 to 2005
Annual average % change



The sector experienced very high employment growth between 2000 and 2005 of five times the growth rate for all sectors. The regional distribution of this employment growth is generally even, with high growth everywhere except in the Netherlands, France and a few regions in the new Member States.

The highest growth rates were recorded in Greece, the two most recent members, Romania and Bulgaria, and Spain.

Map 7.6 on the change of employment in industry leaves no doubt that the sector is on the way to losing its position as the EU's top employer. The decline of people employed in industry is in evidence in almost all the regions, with the exception

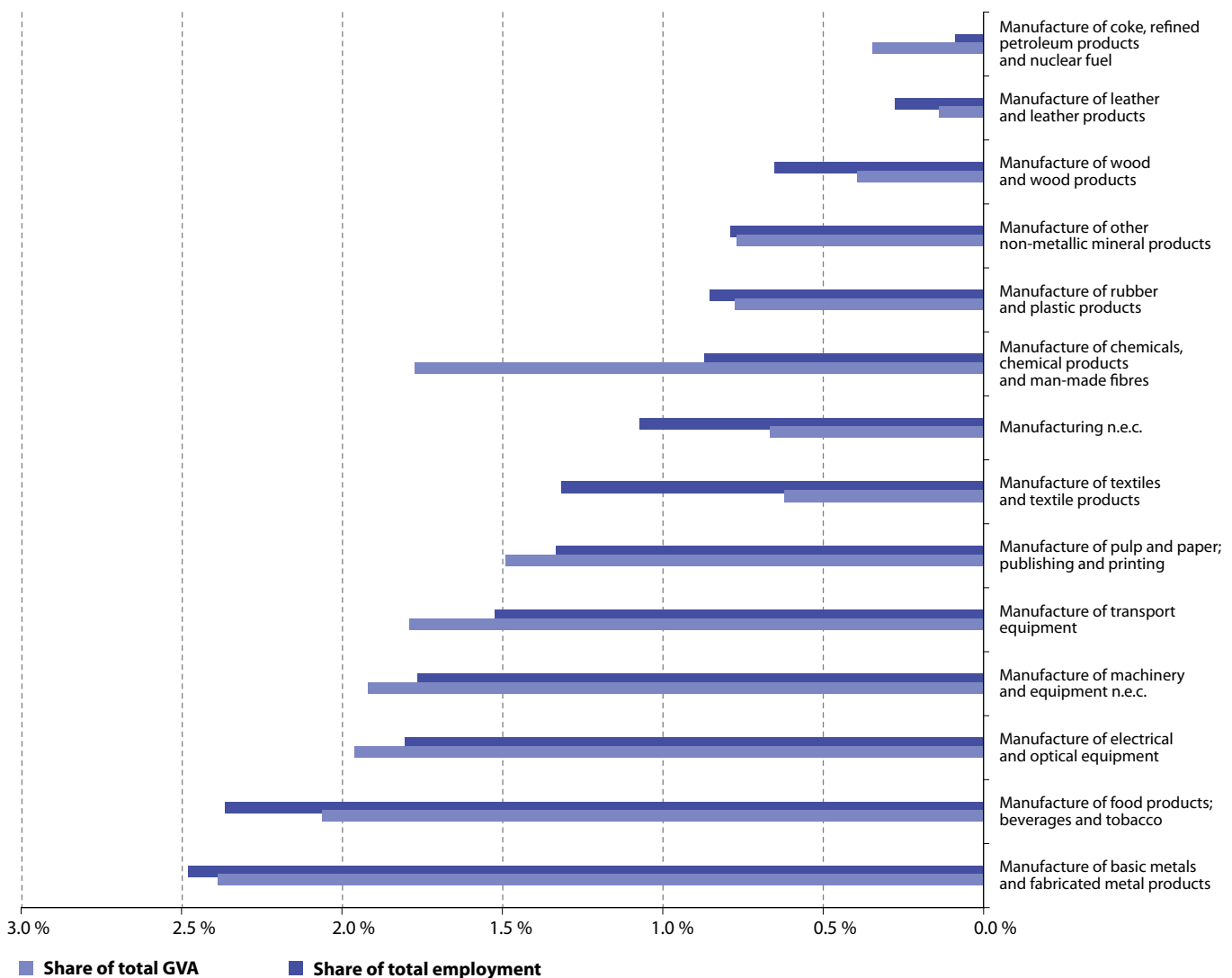
of a few regions in Italy, the new Member States and Spain, which experienced strong growth.

Manufacturing vs knowledge economy

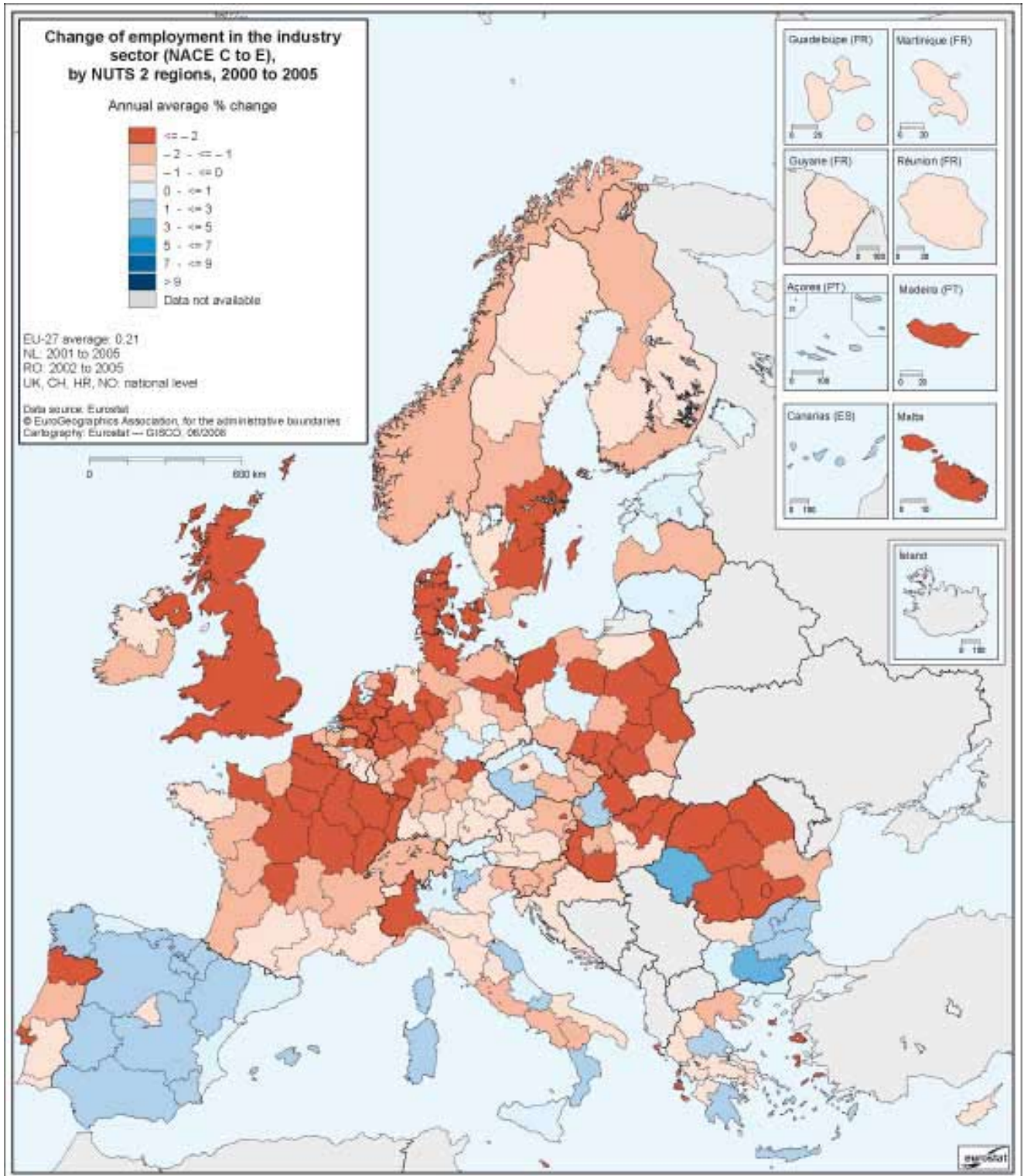
While real estate, renting and business activities (the same applies to financial intermediation) are defined by Eurostat as knowledge-intensive services, thus making them part of the definition of knowledge economy as a whole, this is not the case for manufacturing.

Only four of the 14 sub-sectors of manufacturing in Figure 7.3 — manufacture of electrical and optical equipment (NACE sub-section DL),

Figure 7.3: Share of GVA and employment in manufacturing (NACE D), 2005
Percentage



Map 7.6: Change of employment in the industry sector (NACE C to E), by NUTS 2 regions, 2000 to 2005
Annual average % change



manufacture of machinery and equipment n.e.c. (DK), manufacture of transport equipment (DEM) and manufacture of chemicals, chemical products and man-made fibres (DG) — use high or medium-high technology and are thus considered to be part of the knowledge economy.

These four sub-sectors displayed the highest productivity in the EU in 2005. In general, high and medium-tech manufacturing employment declined a little, but the downswing in the other manufacturing sectors was much stronger. GVA growth in the high and medium-high technology manufacturing sectors was far higher than in the low and medium-low technology sectors.

The same applies to knowledge-intensive services in comparison to less knowledge-intensive services, such as the hotels and restaurants sector, public administration and defence, activities of households, and so on.

The knowledge economy covers almost 40 % of total employment within the EU-27, and this share is growing. It includes sectors which are most likely to create growth as they tend to be less labour-intensive, have higher valued added per person employed, are less exposed to globalisation, use highly skilled labour and thus have the capacity to innovate and create, and turn new ideas into value. Indeed, innovation, skills, enterprise and competition are the main drivers of increases in long-term productivity.

In 2005, the most important manufacturing sub-sectors in terms of employment were: manufacture of basic metals and fabricated metal products (DJ), manufacture of food products, beverages and tobacco (DA) — both with lower technological intensity — manufacture of electrical and optical equipment (DL), manufacture of machinery and equipment n.e.c. (DK) and manufacture of transport equipment (DEM).

These five sub-sectors each account for between 1.5 % and 2.5 % of total employment in the sector. Only one of these five important manufacturing sub-sectors, manufacturing of transport equipment, increased its share of employment. The only other sub-sector to experience an increase in employment is manufacturing of rubber and plastic products, which is classified as using mostly low technology.

The share of GVA in the 14 sub-sectors follows a similar path. The sub-sectors with the highest share are: manufacture of basic metals and fabricated metal products (DJ), manufacture of food products, beverages and tobacco (DA), fol-

lowed by the four high and medium-technology sub-sectors: manufacture of electrical and optical equipment (DL), manufacture of machinery and equipment n.e.c. (DK), manufacture of transport equipment (DEM) and manufacture of chemicals, chemical products and man-made fibres (DG).

Between 2000 and 2005, only two sub-sectors saw their GVA decline: manufacture of leather and leather products and manufacture of textiles and textile products, both classified as low technology. These two sub-sectors also lost the highest share of employment and are included in the analysis of the Regional Policy DG as sectors vulnerable to increased global competition.

Two sub-sectors experienced very high increases in GVA: manufacture of electrical and optical equipment and manufacture of chemicals, chemical products and man-made fibres. Two more sub-sectors experienced above-average increases in GVA: manufacturing of rubber and plastic products and manufacturing of transport equipment.

Conclusion

The analysis shows that the decades-old trend of a shift from the primary and secondary sectors to the service sector, from less productive to more productive sectors, and from the less knowledge-intensive economy to the knowledge economy continues.

We can distinguish between two types of regions in the EU: regions with a low share in the high value added sectors (but very high growth rates) and persistently high shares in the less value added and less knowledge-intensive sectors, and regions with a high share (but lower growth rates) in the high value added and more knowledge-intensive sectors, such as real estate, renting and business activities and the high and medium-tech manufacturing sector.

The majority of the regions in the first group fall under the convergence objective of the European cohesion policy ⁽⁵⁾. Similarly, most of the regions in the second group fall under the regional competitiveness and employment objective (RCE) of the European cohesion policy. This suggests that, in the RCE regions, the high value added and knowledge-intensive sectors have been the main drivers of growth, and economic restructuring towards these sectors can also play a crucial role in helping the convergence regions to catch up. This has several implications from a policy point of view.

⁽⁵⁾ Convergence regions are the NUTS 2 regions whose GDP per inhabitant, measured in purchasing power parities for the period 2000–02, is less than 75 % of the average GDP of the EU-25 for the same period. All the non-convergence regions are eligible under the regional competitiveness and employment objective.



The main challenges in the convergence regions, located mainly in the new Member States, are the huge employment loss in the primary sectors and the emerging competition from the Asian economies in the low value added sectors.

The first challenge calls for measures to ensure the flow of the labour force from declining to expanding activities. Skill requirements for the newly created jobs in the service sector, however, tend to be higher than those for the jobs lost in manufacturing. Hence, convergence regions should focus on improving the level of education of their labour forces and increasing their share of knowledge workers. In the meantime, the issue of lifelong learning presents itself as a genuine means of shortening periods of unemployment.

Secondly, these regions will need to modernise and diversify their economic structure into high value added sectors. Industry is bound to remain an important sector for convergence regions, at least in the medium term. Therefore, it is important to reorientate production towards high productivity and value added activities by creating the conditions for business, and particularly SMEs, to adopt and adapt innovative products and processes, to establish cooperation networks with other enterprises and with research institutes, to access risk capital and to internationalise their activities. Currently, around 80 % of all resources under the European cohesion policy are available to convergence regions, with a substantial amount going to economic restructuring.

In the RCE regions, the challenge lies in maintaining and possibly increasing the competitiveness of these regions in the high value added sectors, not only in Europe but also and especially in relation to regions of the United States. Investment in research and development (R & D) has a key role to play in deciding who has a competitive edge. Investment in R & D in the RCE regions is almost three times higher than in the convergence regions but lower than in US regions.

This clearly underlines the focus of European cohesion policy in RCE regions towards more innovation, as underscored in particular by its contribution to achieving the aims of the renewed Lisbon strategy.

In this respect, the European cohesion policy requires old Member States to earmark at least 75 % of the funds for their RCE regions and 60 % of the funds for the convergence regions in investment categories that are particularly conducive to growth, 'such as R & D, physical infrastructure, environmentally friendly technologies, human capital and knowledge'. Earmarking was not compulsory for the new Member States, but they also focus a substantial amount of their investment on these types of investments.

Most of the Member States have engaged in the exercise and the earmarking targets have been reached. An amount of around EUR 210 billion has been earmarked in support of these investments, an increase of over EUR 55 billion compared with the programming period 2000–06.

Methodological notes

A common definition of productivity is 'a ratio of a volume measure of output to a volume measure of input use' (OECD, 2001). A volume measure of regional (and sectoral) GVA is the preferred measure for output. GVA is preferable to GDP at regional level also, because it excludes taxes or subsidies on products that are difficult to attribute to local units. To measure productivity at regional and sectoral levels, GVA is divided by the number of people employed, referred to also as labour productivity. Labour productivity provides a better indicator than GVA per inhabitant because it is not distorted by potential regional demographic differences, including different dependency ratios. Nor is it distorted by cross-regional commuting that causes disparities between the number of people who live in a region and the number who work there.

However, GVA per person employed does not take account of the balance between different sectors in a region. Nor does it take regional labour market structures or different working patterns into consideration, such as the possible mix of part- and full-time workers, home workers, and so on. Therefore, GVA per hour worked is a more appropriate measure of productivity, because it apportions GVA to the total hours worked by the workforce.

Up until now, regional figures for total number of hours worked are still estimates. In future, systematic collection of regional data for hours worked will become available. Data availability will improve substantially from 2008 onwards.

Another issue is the availability of regional deflators for GVA. Regional GVA is not available at constant prices. As a result, growth rates cannot be calculated. In this chapter, sector-specific regional GVA at current prices has been used to regionalise sector-specific national-level GVA at constant prices.

As regards the sectoral breakdown of regional GVA and employment data, as of this year, regional accounts only provide a six-sector breakdown for NUTS 2 regions.

The six sectors are:

Sections A + B:	Agriculture, forestry and fishery
Sections C–E:	Mining, manufacturing, electricity, gas and water supply
Section F:	Construction
Sections G–I:	Wholesale and retail trade, repair of vehicles and personal goods, transport, storage and communication
Sections J + K:	Financial intermediation Real estate, renting and business activities
Sections L–P:	Public administration and defence; compulsory social security Education Health and social work Other community, social and personal service activities Activities of households

The availability of regional accounts data at NUTS 2 level is not complete: for Malta, no GVA and, for the UK, no regional GVA and employment figures are available.