

## Business economy overview

The re-launched Lisbon strategy for growth and jobs was presented on 25 January 2006 <sup>(1)</sup>. It distinguishes between macro-economic, micro-economic and employment challenges when analysing how to make Europe the world's most dynamic, competitive, knowledge-based economy, while keeping unemployment as low as possible.

### 1.1: MACRO-ECONOMIC OUTLOOK

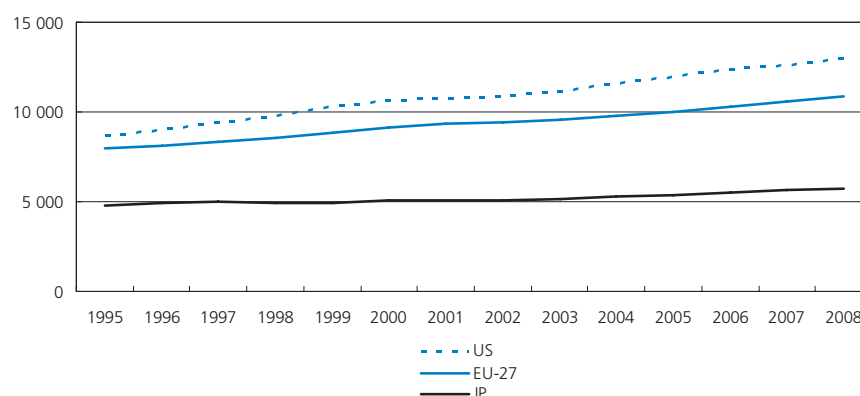
#### GROSS DOMESTIC PRODUCT (GDP)

The most common indicator for measuring a nation's economic activity is gross domestic product (GDP). This indicator covers the production activity of resident producers, calculated as the sum of gross value added from all activities/industries within an economy (the so-called output approach).

Figure 1.1 shows the evolution of constant price GDP (at fixed 2000 exchange rates) between 1995 and 2008 in the three Triad economies of the EU-27, Japan and the United States (forecasts are made for 2007 and 2008). For the whole of this period, GDP rose on average by 2.4 % per annum in the EU-27, which was below the average rate of 3.1 % per annum for the United States, but above the 1.4 % per annum growth rate recorded in Japan.

<sup>(1)</sup> 'Time to move up a gear - the new partnership for growth and jobs', COM(2006) 30.

**Figure 1.1**  
**GDP at market prices in constant prices**  
**(EUR billion, chain-linked volumes, at 2000 exchange rates) (1)**



(1) Including forecasts for 2007 and 2008.  
Source: Eurostat (Economy and finance)

GDP growth in the EU-27 rose at a relatively fast pace during the period 1997 to 2000, with annual rates of growth ranging from 2.7 % (1997) to 3.9 % (2000), after which there was a slowdown in the pace at which economic activity expanded, with 2.0 % growth in 2001 followed by increases of just over 1 % in both 2002 and 2003. The rate of GDP growth for the EU-27 returned to a somewhat higher level in 2004 (2.5 %), before slowing again in 2005 (1.7 %), although there was a faster expansion in 2006 (3.0 %) – the highest growth rate for six years. In 2006, some of the highest rates of GDP growth were recorded among the 12

Member States that recently joined the EU. This distribution of growth follows what is often referred to as the 'convergence hypothesis', according to which countries with relatively low levels of per capita GDP grow more rapidly.

It is important to bear in mind these cyclical changes in GDP that are observed for EU-27 economic output when reading the sectoral chapters that follow in this publication, as the evolution of output or sales in many activities follows closely the economic cycle of the whole economy.

The level of GDP, per se, says little about the economic performance of a country, as large countries will tend to have higher levels of GDP. In order to normalise GDP, one of the most common approaches is to use the measure of GDP per capita, obtained by dividing GDP by the number of inhabitants in a country (or region). This indicator is frequently used as a measure of living standards, and is also used as an overall measure of competitiveness. For international comparisons ideally, GDP per capita should be calculated in terms of purchasing power standards (PPS) <sup>(2)</sup>.

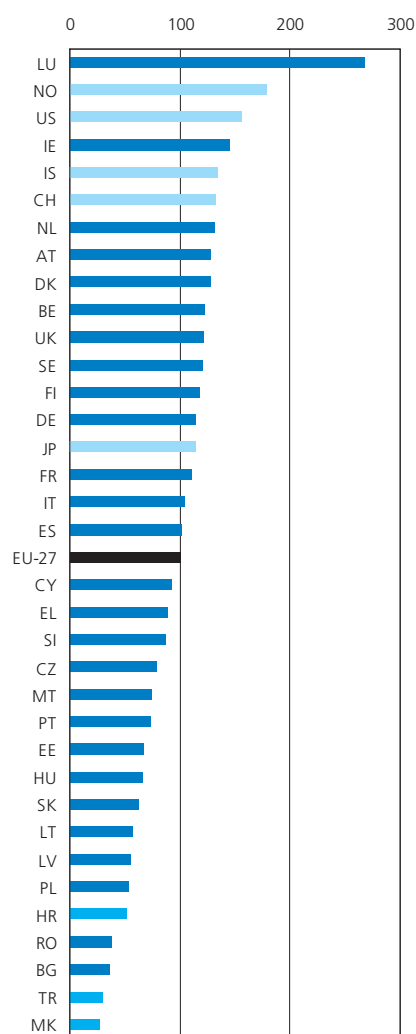
Luxembourg stood out as having by far the highest GDP per capita in 2006, almost 2.7 times the EU-27 average (see Figure 1.2), while the next Member State in the ranking was Ireland, where GDP per capita was slightly less than 46 % above the EU-27 average. At the other end of the range, Greece and Portugal and all 12 of the Member States that joined the EU in 2004 or 2007 reported GDP per capita below the EU-27 average.

The growth of GDP per capita in the EU is almost entirely driven by additional value added being generated, as most of the Member States have relatively stable levels of population. GDP per capita has, nevertheless, grown at a slower pace in the EU-27 over the past decade than in the United States. This may, in part, be explained by productivity gains in the EU slowing, while technological gains stimulated GDP growth in the United States <sup>(3)</sup>. These trends have structural features, which became the focus of the Lisbon strategy and its subsequent re-launch. Indeed, the main focus of policies for improving European competitiveness are concerned with boosting productivity growth through investment in research and development (R&D), improving European infrastructure, enhancing human capital, and promoting competition.

<sup>(2)</sup> A purchasing power parity is a currency conversion rate that allows indicators expressed in national currency to be converted to an artificial common currency while adjusting for different price levels between countries; this artificial common currency is called the purchasing power standard (note that EU-27 values are unchanged in euro and PPS terms).

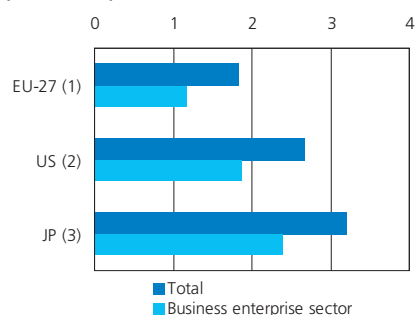
<sup>(3)</sup> Communication from the Commission, 'Economic reforms and competitiveness: key messages from the European Competitiveness Report 2006', COM(2006) 697 final.

**Figure 1.2**  
**GDP per capita at market prices, 2006**  
**(EU-27 = 100, based on PPS) (1)**



(1) Forecasts.  
Source: Eurostat (Economy and finance)

**Figure 1.3**  
**Total intramural research and development expenditure (GERD), 2005**  
**(% of GDP)**



(1) Estimates.  
(2) Provisional, 2004.  
(3) 2003.  
Source: Eurostat (Research and development)

## RESEARCH AND DEVELOPMENT (R&D)

The revamping of the Lisbon strategy in 2005 is, as noted above, partly based on a decision to encourage more innovation and research, with the hope that this will stimulate technologically-driven productivity gains. This policy also depends, to some degree, on creating a business environment that provides sufficient incentives to enterprises so they will commit resources to innovation. It also relies on a capital market in which it is possible to raise the necessary finance for funding research.

In economic terms, the allocation of resources to research efforts suffers from what are often referred to as 'market failures'. It is often difficult for an enterprise to protect their intellectual assets, and as a result, their private returns may fall short of potential social returns: for example, consider a pharmaceuticals enterprise that might spend decades looking for a cure to an illness, only to find imitators copying their new drug as soon as it is available to the general public. Another example of market failure is a poorly functioning capital market, which may result from problems associated with asymmetric information: for example, a banker may well have less information about the value of a certain project than the entrepreneur, who is unwilling to reveal certain aspects of their research for fear of this becoming public knowledge.

The latest round of the Community Innovation Survey (CIS4) sheds some light on these problems. When asked about factors hampering innovation, 23.6 % of all enterprises <sup>(4)</sup> cited innovation costs as being too high, while 15.4 % complained about a lack of appropriate sources of finance, and 10.6 % that a lack of qualified personnel was hampering their innovation efforts. For all three of these factors, a higher proportion of small enterprises (with between 10 and 49 persons employed) faced difficulties that hampered their innovation efforts, while large enterprises (with 250 or more persons employed) faced the least difficulties.

<sup>(4)</sup> Eurostat, CIS4: the survey only covers NACE Sections C, D, E, I and J, NACE Divisions 51 and 72, and NACE Groups 74.2 and 74.3; EU averages based on available information (innovation costs too high: excluding Denmark, Malta and Sweden; lack of appropriate sources of finance: excluding Cyprus, Malta, Sweden and the United Kingdom; lack of qualified personnel: excluding Denmark, Luxembourg, Malta and Romania).

A low level of business enterprise expenditure is often given as a reason for the relatively low levels of R&D expenditure in the EU-27 (compared with Japan or the United States). R&D expenditure made by the business enterprise sector stood at 1.17 % of GDP in 2005 in the EU-27, compared with a provisional value of 1.87 % in the United States for 2004 and 2.40 % in Japan in 2003 (see Figure 1.3). While the business enterprise sector contributed approximately 64 % of total R&D expenditure in the EU-27, this proportion rose to 70 % in the United States and 75 % in Japan.

### HUMAN RESOURCES IN SCIENCE AND TECHNOLOGY (HRST)

Education and training initiatives are also central to the revised Lisbon objectives. There are many policies within the Member States that aim to raise the proportion of higher education graduates, with the belief that if Europe is to remain competitive in the knowledge-driven economy, it will need a higher number of graduates with qualifications suitably adapted to increasingly demanding labour market requirements. Education and in particular tertiary education, not only renews stocks of human capital but also promotes economic growth. Therefore, investment in education can be seen as an investment in future economic well-being as well as an investment in individual success.

Table 1.1 shows that EU-27 human resources in science and technology (HRST) totalled 75.3 million persons in 2006 (note that there is some overlap as regards the breakdown of this total figure as some persons have a science or technology education and work in a science or technology occupation). Almost 53 % of the HRST workforce were employed within business economy activities (as defined by NACE Sections D to K), with a relatively high proportion working in predominantly public sector activities (NACE Sections L to Q).

### EXCHANGE RATES

The competitiveness of an economy can be radically changed as a result of movements in currency exchange rates, as the price of exports and imports is directly affected. Euro exchange rates were fixed for eleven Member States in 1999; Greece subsequently joined the euro area in 2001 and was followed by Slovenia at the start of 2007. Entry into the single currency of the euro area is conditional upon Member States meeting a set of convergence criteria. While Denmark and the United Kingdom have a special opt-out, the remaining twelve Member States have derogations, and are expected to adopt the euro once the necessary conditions are fulfilled. By fixing their exchange rates, enterprises within the euro area face a

**Table 1.1** Human resources in science and technology (HRST), EU-27, 2006 (thousands, 25-64 years old)

	NACE Sections	Total HRST	Core Education (1)	Occupation (2)	Scientists/engineers (4)
<b>Total</b>	<b>A to Q</b>	75 320	33 990	51 022	58 288
<b>Manufacturing</b>	<b>D</b>	10 317	3 516	6 386	7 447
<b>Elec., gas, water supply &amp; construction</b>	<b>E and F</b>	3 422	1 020	2 307	2 135
<b>Distributive trades</b>	<b>G</b>	7 230	1 580	4 167	4 644
<b>Hotels and restaurants</b>	<b>H</b>	897	90	749	238
<b>Transport, storage and communication</b>	<b>I</b>	3 156	915	2 024	2 047
<b>Financial intermediation</b>	<b>J</b>	3 661	1 179	2 280	2 561
<b>Real estate, renting &amp; business activities</b>	<b>K</b>	11 111	5 731	7 736	9 106
<b>Others</b>		35 526	19 959	25 373	30 110

(1) Successfully completed the third level of a science and technology field of study and employed in a science and technology occupation.

(2) Successfully completed the third level of a science and technology field of study.

(3) Employed in a science and technology occupation.

(4) Employed in physical, mathematical and engineering occupations or in life science and health occupations.

Source: Eurostat (Human resources in science & technology)

more stable business environment, in particular because the majority of exports made by Member States are destined for other Member States. For those enterprises that operate outside of the euro area there is sometimes a higher degree of uncertainty when dealing with suppliers or customers abroad.

Exchange rate movements are inherent within all the monetary indicators that are presented in this publication, as data are consistently shown in the euro (EUR) denomination. As such, exchange rate fluctuations should be born in mind when analysing the evolution of series over time, especially between euro area and non-euro area countries. As an example of currency exchange rate effects, the value of the euro fell by 29.5 % overall against the American dollar between 1996 and 2001, leading to more expensive imports, but lower prices for those trying to export to the United States. Between 2001 and 2004 this trend was reversed as the euro appreciated by 38.9 % overall against the dollar, while the exchange rate was almost unchanged in 2005 and 2006. The first table presented within the background information found at the end of this publication shows exchange rates against the euro for the period 1996 to 2006.

### STRUCTURE OF THE EU ECONOMY – AN OVERVIEW

The following chapters within European business cover the business economy as defined by NACE Sections C to K. According to national accounts, this group of activities together accounted for 75.7 % of the total value added generated in the EU-27 in 2006 (see Figure 1.4). Financial, real estate, renting and business activities (NACE Sections J and K) accounted for 27.6 %, while distribution; hotels, restaurants and catering (HORECA); communications and transport services (NACE Sections G to I), as well as industry (NACE Sections C to E) accounted for more than one fifth of the EU-27's economic output each; construction (NACE Section F) registered a 6.4 % share. Of the activities not covered in European business, the lion's share of the remaining added value (22.4 %) was generated by public administration, health, education, other services, and households (NACE Sections L to P), while the remaining 1.9 % was attributed to agriculture, hunting, forestry and fishing (NACE Sections A and B).

There has been a shift in the structure of economic output within the EU-27 resulting from an outsourcing phenomenon, as supporting and ancillary operations which were previously done in-house are awarded to outside contractors (for example, transport and logistics, information technology, accounts, industrial cleaning), while organisation, know-how, innovation, brand creation/management and customised services have been increasingly important as sources of competitive advantage. At the same time, relatively high wages, and increased global trade have driven out price sensitive segments of production to lower labour cost regions of the

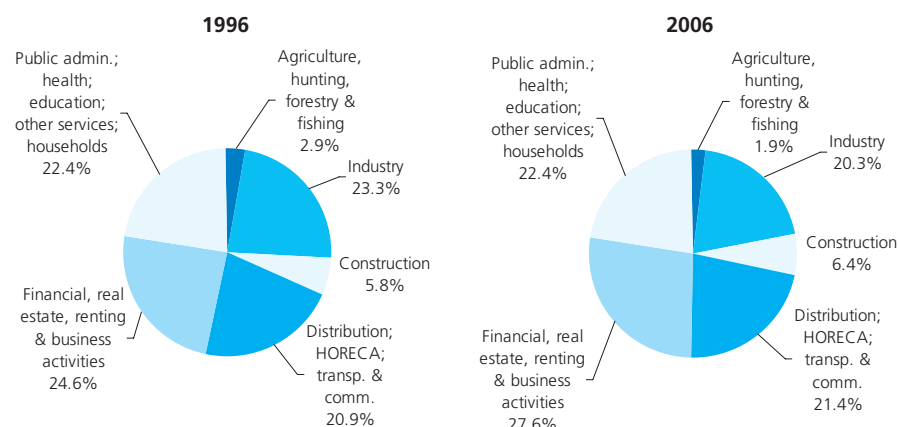
world. Finally, the demand for manufactured goods is affected by physiological limits to further consumption (for example, food) and many mature EU markets for manufactured goods are saturated, presenting little opportunity for rapid growth. On the other hand, the income elasticity of demand for immaterial sources of well-being is thought to be much higher and so as disposable income rises, consumers tend to devote an increasing share of their expenditure to services.

These changes may, at least in part, explain why the share of industry in EU-27 total value added declined by 3 percentage points between 1996 and 2006, and that of agriculture, hunting, forestry and fishing by 1 percentage point (from an already low starting point of 2.9 % in 1996). The largest relative gains in economic activity between 1996 and 2006 were concentrated within the services sector, in particular financial, real estate, renting and business activities (which reported a 3 percentage point increase in its share of EU-27 total value added).

In employment terms (see Figure 1.5) the situation was quite different, as the business economy accounted for just under two thirds (64.6 %) of the EU-27's workforce in 2006, some 11.1 percentage points lower than its corresponding share of value added. The largest employer in 2006 was public administration, health, education, other services, and households, where almost three out of ten (29.1 %) persons in the workforce were employed, while just under one in four (24.9 %) worked within the activities of distribution, hotels, restaurants and catering (HORECA), communications and transport services, 17.9 % in industrial activities and 14.7 % in financial, real estate, renting and business activities, the latter contrasting starkly with its 27.6 % share of value added. It is interesting to note that with the accession of Bulgaria and Romania, the proportion of the EU-27's workforce working in agriculture, hunting, forestry and fishing activities reached 6.4 %.

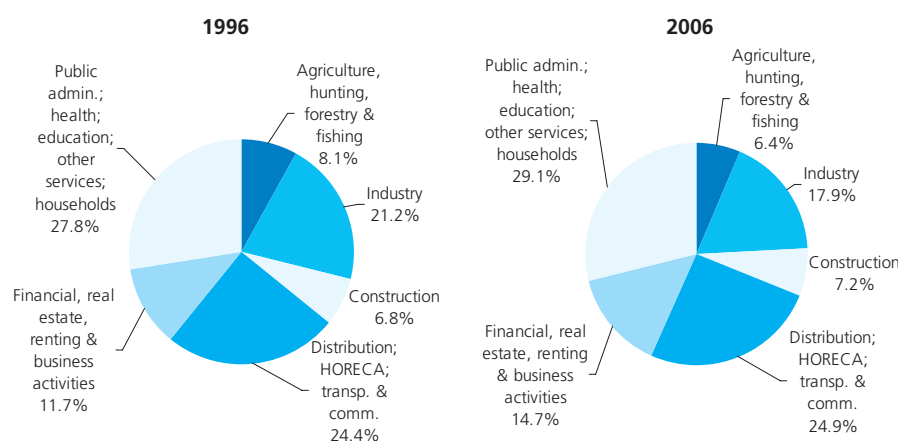
These differences between the relative shares of total value added and employment provide a measure of labour productivity: industry and financial, real estate, renting and business activities were the most productive (or capital intensive) activities within the EU economy using this measure (Figure 1.14 later in this chapter presents a much more detailed sectoral breakdown of labour productivity). All of the remaining activities were relatively labour intensive; this was particularly the case for public administration, health, education, other services, and households.

**Figure 1.4** Breakdown of value added in current prices, EU-27 (% of total value added)



Source: Eurostat (Economy and finance)

**Figure 1.5** Breakdown of employment, EU-27 (% of total employment)



Source: Eurostat (Economy and finance)

Looking at the evolution of value added over time (in real terms), EU-27 output grew, on average, by 2.4 % per annum between 1996 and 2006. The slowest growth rates were recorded for agriculture, hunting, forestry and fishing (on average, 0.6 % per annum). The highest growth rates were registered for financial, real estate, renting and business activities (3.2 % per annum), while the only other activity to report above average growth was distribution; hotels, restaurants and catering (HORECA); communications and transport services (3.1 % per annum).

The number of persons working in the EU-27 rose by 19.2 million persons between 1996 and 2006. The largest relative and overall gains were recorded for financial, real estate, renting and business activities, where employment rose by an average of 3.3 % per annum, or some 8.7 million persons overall. The rate of EU-27 employment growth averaged 1.4 % per annum for construction (an overall gain of 2.1 million persons employed), a rate that was repeated for public administration, health, education, other services, and households (8.1 million persons), while average employment growth equated to 1.1 % per annum for distribution, hotels, restaurants and catering (HORECA), communications and transport services (5.8 million persons). Two activities reported a net reduction in EU-27 employment between 1996 and 2006, with the agriculture, hunting, forestry and fishing workforce reduced by an average of 1.4 % per annum (2.2 million fewer persons overall), and that for industry contracting by 0.8 % per annum (3.3 million).

As such, the two activities with the highest levels of labour productivity had diverging employment trends: as industry registered the largest absolute decline in employment between 1996 and 2006, while financial, real estate, renting and business activities recorded the largest increase (in relative and absolute terms). These contrasting developments may, in part, be related to changes in the business paradigm, as many industrial enterprises have made cost-motivated investments in production facilities in eastern Europe, China or India. Such moves may well be driven by the benefits associated with relatively low unit labour costs, as well as market entry into untapped regions with potentially high future sales. This trend has led to the re-location of labour, with European enterprises focusing their home production increasingly on knowledge-intensive, innovative activities.

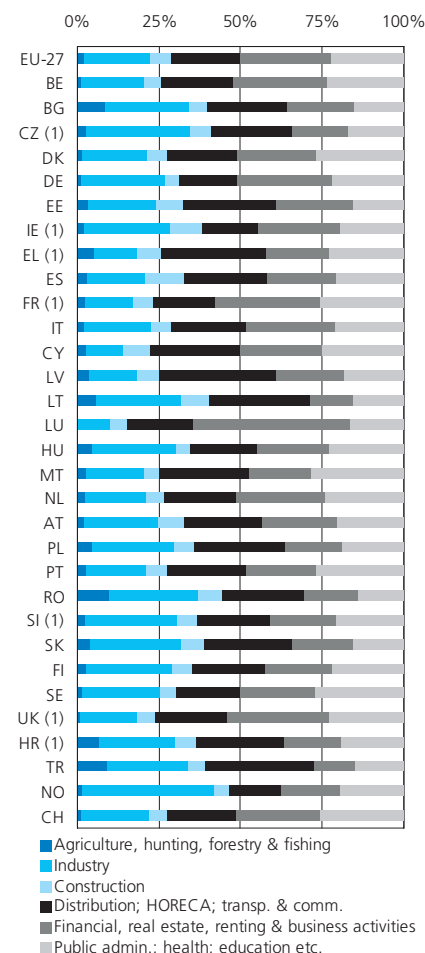
**STRUCTURAL DIFFERENCES BETWEEN THE MEMBER STATES**

Figure 1.6 shows the relative contribution of the six national accounts activity aggregates to total value added in 2006. The structural differences observed should be borne in mind when reading the sectoral chapters that follow. It is also important to bear in mind the relative importance of those sectors that are not included within the business economy, as these sometimes account for an important proportion of total economic activity. Shares and ratios which will later be presented in relation to the non-financial business economy (used as the denominator) will, to some degree, depend on the relative importance/performance of the non-financial business economy in relation to the total economy.

Agriculture, hunting, forestry and fishing accounted for a relatively high share of national value added in Romania and Bulgaria (9.6 % and 8.5 %) in 2006, while Lithuania, Greece (2005), Poland, Hungary and Slovakia reported these activities generating at least 4 % of their value added. Upwards of 25 % of total value added was generated by public administration, health, education, other services, and households in Malta, Sweden, Denmark, Portugal and France (2005), compared with an EU-27 average of 22.4 %. In contrast, less than 16 % of national value added was derived from these activities in Estonia, Lithuania, Slovakia, Bulgaria and Romania.

Among the activities which are covered by this publication, Luxembourg, France (2005), the United Kingdom (2005), Germany and Belgium were all relatively specialised in financial, real estate, renting and business activities, to such a degree that no other Member State could report that these activities had a share of total

**Figure 1.6**  
**Breakdown of gross value added at basic prices, 2006**  
**(% share of total gross value added)**

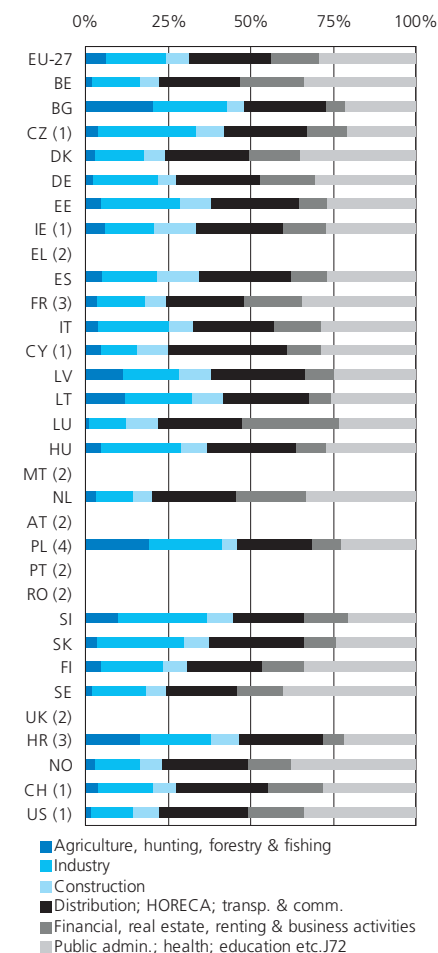


(1) 2005.  
Source: Eurostat (Economy and finance)

value added that was above the EU-27 average. In Luxembourg, financial, real estate, renting and business activities accounted for almost half (48.6 %) of the total value added generated in 2006.

While just over one fifth (20.3 %) of the EU-27's value added was generated in industrial activities, the share rose to 27 % or higher in the Czech Republic (2005), Slovenia (2005), Slovakia and Romania. The tourism-rich economies of Cyprus and Malta, as well as the Baltic States and Greece (2005) all reported relatively high shares of value added being generated in distribution, hotels, restaurants and catering (HORECA), communications and transport services, while the most specialised Member States within the construction sector were Spain (12.2 % of total value added) and Ireland (10.0 %, 2005).

**Figure 1.7**  
**Breakdown of employment, 2006**  
**(% share of total employment)**



(1) 2005.  
(2) Not available.  
(3) 2004.  
(4) Estimates.  
Source: Eurostat (Economy and finance)

Figure 1.7 shows a similar breakdown to the previous graph, but this time for employment instead of value added. One of the most noticeable aspects is the relatively high proportion of the workforce occupied in agriculture, hunting, forestry and fishing activities, which rose to double-digits in Bulgaria, Poland (2005), Lithuania and Latvia. The relative importance of public administration, health, education, other services, and households was also usually much higher for employment than for value added, with as many as 40.2 % of the Swedish workforce occupied in these activities in 2006.

## 1.2: STRUCTURAL PROFILE OF THE BUSINESS ECONOMY

In the face of globalisation and international competition, and in keeping with the revised Lisbon objectives, the European Commission launched a new industrial policy in October 2005<sup>(5)</sup>. It included initiatives on: competitiveness, energy and the environment; intellectual property rights; better regulation; industrial research and innovation; market access; skills, and managing structural change; as well as sector-specific policies for: pharmaceuticals; life sciences and biotechnology; chemicals; defence; the European space programme; information and communication technologies; mechanical engineering; food; fashion and design industries. The policy is designed to improve Europe's economic standing by allowing businesses to compete openly and fairly, and by

<sup>(5)</sup> Communication from the Commission, 'Implementing the Community Lisbon Programme: A policy framework to strengthen EU manufacturing - towards a more integrated approach for industrial policy', COM(2005) 474 final.

making Europe an attractive place to invest and work in, and provides the policy framework for many of the business economy activities covered by this publication.

Structural business statistics (SBS) constitute the principal source of information used in this publication. The main SBS aggregates, often referred to during the course of this publication, include:

- the non-financial business economy (NACE Sections C to I and K);
- industry (NACE Sections C to E);
- construction (NACE Section F), and;
- non-financial services (NACE Sections G to I and K).

Note that financial services (NACE Section J) are kept separate (see Chapter 24) because of their specific nature and the limited availability of most standard business statistics in this area. Note also that the industrial activity of printing,

although included in the industry SBS aggregate, is covered in Chapter 21, within the non-financial services section of this publication.

### STRUCTURAL PROFILE OF THE EU-27'S NON-FINANCIAL BUSINESS ECONOMY

There were 18.9 million active enterprises within the EU-27's non-financial business economy in 2004 (see Table 1.2). The vast majority of these (73.9 %) were operating within non-financial services, while a higher proportion of enterprises were active in the construction sector (14.3 % of the total) than within industry (12.1 %).

On the basis of the activity aggregates used for the sectoral chapters that follow in the remainder of this publication, the largest numbers of enterprises were usually found within activities that are, to some degree, characterised as having relatively low barriers to entry, and large, proximity markets. Business services (see Chapter 22), retail trade and repair

**Table 1.2**  
Main indicators for the non-financial business economy, EU-27, 2004

Chapter		Enterprises		Turnover		Value added		Persons employed	
		(thousands)	(% of non-financial business economy)	(EUR billion)	(% of non-financial business economy)	(EUR billion)	(% of non-financial business economy)	(thousands)	(% of non-financial business economy)
<b>1</b>	<b>Non-financial business economy (1)</b>	18 900	100.0	19 000	100.0	5 100	100.0	125 000	100.0
	<b>Industry (2)</b>	2 280	12.1	6 930	36.5	1 800	35.3	37 500	30.0
<b>2</b>	<b>Food, beverages &amp; tobacco</b>	296	1.6	928	4.9	200	3.9	4 772	3.8
<b>3</b>	<b>Textiles, clothing, leather &amp; footwear (1)</b>	266	1.4	242	1.3	68	1.3	3 410	2.7
<b>4</b>	<b>Wood &amp; paper (1)</b>	217	1.1	278	1.5	77	1.5	2 060	1.6
<b>5</b>	<b>Chemicals, rubber &amp; plastics (1)</b>	100	0.5	870	4.6	250	4.9	3 700	3.0
<b>6</b>	<b>Other non-metallic mineral products (3)</b>	102	0.5	211	1.1	73	1.4	1 600	1.3
<b>7</b>	<b>Metals &amp; metal products</b>	399	2.1	699	3.7	213	4.2	4 991	4.0
<b>8</b>	<b>Machinery &amp; equipment</b>	164	0.9	532	2.8	172	3.4	3 661	2.9
<b>9</b>	<b>Electrical machinery &amp; optical equipment (3)</b>	196	1.0	631	3.3	190	3.7	3 600	2.9
<b>10</b>	<b>Transport equipment (3)</b>	43	0.2	862	4.5	177	3.5	3 200	2.6
<b>11</b>	<b>Furniture &amp; other manufacturing (4)</b>	227	1.2	164	0.9	51	1.0	1 900	1.5
<b>12</b>	<b>Non-energy mining &amp; quarrying</b>	17	0.1	40	0.2	15	0.3	291	0.2
<b>13</b>	<b>Energy (1)</b>	21	0.1	1 147	6.0	240	4.7	1 980	1.6
<b>14</b>	<b>Recycling &amp; water supply (1)</b>	23	0.1	70	0.4	27	0.5	500	0.4
<b>15</b>	<b>Construction</b>	2 695	14.3	1 289	6.8	434	8.5	13 153	10.5
	<b>Non-financial services (5)</b>	13 962	73.9	11 131	58.6	2 817	55.2	73 833	59.1
<b>16</b>	<b>Motor trades</b>	782	4.1	1 185	6.2	151	3.0	4 067	3.3
<b>17</b>	<b>Wholesale trade</b>	1 682	8.9	3 916	20.6	463	9.1	9 554	7.6
<b>18</b>	<b>Retail trade &amp; repair</b>	3 735	19.8	2 038	10.7	384	7.5	16 970	13.6
<b>19</b>	<b>Hotels &amp; restaurants</b>	1 605	8.5	386	2.0	163	3.2	8 652	6.9
<b>20</b>	<b>Transport services (1)</b>	1 120	5.9	1 030	5.4	360	7.1	8 600	6.9
<b>21</b>	<b>Communications &amp; media (4)</b>	270	1.4	743	3.9	340	6.7	4 900	3.9
<b>22</b>	<b>Business services</b>	3 901	20.6	1 450	7.6	740	14.5	19 433	15.5
<b>23</b>	<b>Real estate, renting &amp; R&amp;D (4)</b>	1 072	5.7	620	3.3	304	6.0	3 500	2.8

(1) Rounded estimates based on non-confidential data.

(2) This aggregate does not match the sum of the activities covered in Chapters 2 to 14, as the industrial activity of publishing is covered in Chapter 21; rounded estimates based on non-confidential data.

(3) Rounded estimates based on non-confidential data for number of persons employed and related shares.

(4) Rounded estimates based on non-confidential data, except for number of enterprises and related share.

(5) This aggregate does not include the activity of industrial printing, which is covered in chapter 21.

Source: Eurostat (SBS)

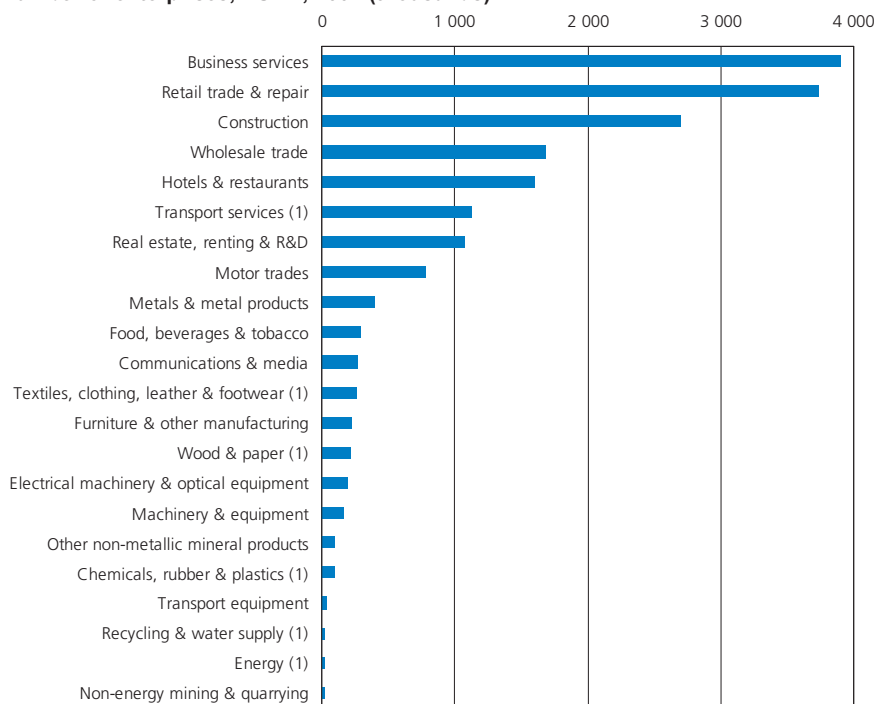
(see Chapter 18) and construction (see Chapter 15) together accounted for almost 55 % of all enterprises active in the EU-27's non-financial business economy in 2004. At the other end of the scale, there were relatively few enterprises operating within activities characterised by high barriers to entry (such as, those with considerable start-up costs to reach a minimum efficient scale of production). These included capital-intensive activities such as transport equipment manufacturing (see Chapter 10), recycling and water supply (see Chapter 14), energy (see Chapter 13) and non-energy mining and quarrying (see Chapter 12); none of these sectors accounted for more than 0.2 % of the total number of enterprises active in the EU-27's non-financial business economy.

The distribution of enterprises across the European economy provides little information when analysing the relative economic importance of the different sectors. Economic weight is more generally measured in terms of value added. Non-financial services contributed a 55.2 % share of the total added value in the EU-27's non-financial business economy in 2004. The proportion accounted for by industrial activities, 35.3 %, was 23.2 percentage points higher than the share of industry in terms of enterprises; construction accounted for the remaining 8.5 % of added value. Looking in more detail, using the activity aggregates used for each sectoral chapter in this publication, the three largest sectors together contributed 32.1 % of the value added generated in the EU-27's non-financial business economy; they were business services, wholesale trade (see Chapter 17) and construction.

Comparing two output measures, namely value added and turnover, the most noticeable difference between the distribution of value added and turnover across the EU-27's non-financial business economy was within distributive trades activities (especially for wholesale trade); the relatively high proportion of sales occurring within these activities is a direct consequence of the nature of these activities, whereby large volumes of products are purchased and resold, normally with a relatively small margin.

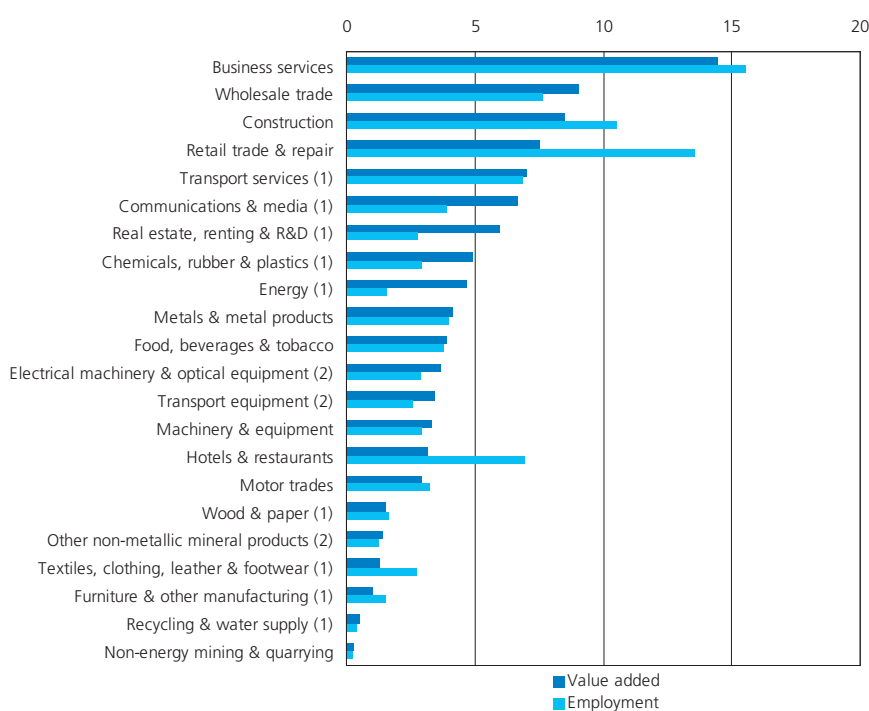
In employment terms, the importance of the relatively labour-intensive construction and non-financial services sectors rose (when compared with shares recorded for output variables such as turnover or value added). Non-financial services accounted for 59.1 % of the EU-27's non-financial business economy workforce, while 30 % were employed in industrial activities and 10.5 % in construction. At a sectoral level, none of the industrial activities represented more than 4 % of the employment total; the highest share being recorded for metals and metal products (Chapter 7). Among the services, the largest

**Figure 1.8** Number of enterprises, EU-27, 2004 (thousands)



(1) Rounded estimates based on non-confidential data. Source: Eurostat (SBS)

**Figure 1.9** Value added and employment, EU-27, 2004 (% share of total)



(1) Rounded estimates based on non-confidential data. (2) Rounded estimates based on non-confidential data for number of persons employed and related shares. Source: Eurostat (SBS)

workforces were found within the activities of business services (15.5 %) and retail trade and repair (13.6 %), the latter in particular using a lot of part-time employment.

Table 1.3

## Main indicators for the non-financial business economy, 2004

	Enterprises		Turnover		Value added		Persons employed	
	(thousands)	(% of EU-27)	(EUR million)	(% of EU-27)	(EUR million)	(% of EU-27)	(thousands)	(% of EU-27)
BE	395	2.1	681 170	3.6	139 118	2.7	2 383	1.9
BG	240	1.3	52 119	0.3	8 288	0.2	1 771	1.4
CZ	880	4.7	239 128	1.3	52 495	1.0	3 573	2.9
DK	192	1.0	360 370	1.9	102 168	2.0	1 660	1.3
DE	1 695	9.0	3 776 609	19.9	1 068 460	21.0	20 687	16.5
EE	36	0.2	25 412	0.1	5 076	0.1	384	0.3
IE (1)	:	0.5	:	1.4	:	1.6	:	0.8
EL	:	:	:	:	:	:	:	:
ES	2 455	13.0	1 718 799	9.0	458 712	9.0	12 839	10.3
FR	2 227	11.8	2 901 660	15.3	718 122	14.1	14 287	11.4
IT	3 740	19.8	2 422 608	12.8	567 204	11.1	14 687	11.7
CY (2)	:	0.2	:	0.1	:	0.1	:	0.2
LV	58	0.3	23 981	0.1	5 339	0.1	593	0.5
LT	53	0.3	32 346	0.2	6 973	0.1	794	0.6
LU (3)	22	0.1	49 496	0.3	11 321	0.2	199	0.2
HU	564	3.0	197 264	1.0	36 103	0.7	2 573	2.1
MT	:	:	:	:	:	:	:	:
NL	485	2.6	986 469	5.2	234 001	4.6	4 609	3.7
AT	265	1.4	426 428	2.2	122 795	2.4	2 354	1.9
PL	1 457	7.7	440 387	2.3	104 778	2.1	7 484	6.0
PT	584	3.1	288 410	1.5	64 481	1.3	2 944	2.4
RO	377	2.0	110 107	0.6	21 583	0.4	4 001	3.2
SI	89	0.5	55 108	0.3	13 511	0.3	568	0.5
SK	36	0.2	63 669	0.3	13 195	0.3	895	0.7
FI	186	1.0	286 892	1.5	72 762	1.4	1 213	1.0
SE	504	2.7	531 045	2.8	148 043	2.9	2 579	2.1
UK	1 530	8.1	3 153 178	16.6	965 093	18.9	17 993	14.4

(1) Excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E).

(2) Excluding real estate activities (NACE Division 70) and research and development (NACE Division 73).

(3) 2003.

Source: Eurostat (SBS)

## SPECIALISATION AND CONCENTRATION

### WITHIN THE MEMBER STATES

Table 1.3 shows that together the economies of Germany, Spain, France, Italy and the United Kingdom generated about three quarters (74.1 %) of the added value within the EU-27's non-financial business economy in 2004, making 73.5 % of all sales, and employing nearly two thirds (64.4 %) of the EU-27's workforce within 61.6 % of all enterprises. These figures hide considerable differences, as Italy and Spain had a larger population of enterprises (in relative and absolute terms), while Germany, France and the United Kingdom had relatively high shares of value added and turnover.



Table 1.4

**Largest and most specialised Member States (on the basis of value added for sectoral chapter headings and value added specialisation ratios relative to the EU-27 for sectoral chapter headings), 2004 (1)**

Chapter		Largest	Second largest	Most specialised	Second most specialised
2	Food, beverages & tobacco (2)	Germany	United Kingdom	Poland	Lithuania
3	Textiles, clothing, leather & footwear (3)	Italy	Germany	Bulgaria	Lithuania
4	Wood & paper (4)	Germany	Italy	Finland	Latvia
5	Chemicals, rubber & plastics (5)	Germany	France	Slovenia	Belgium
6	Other non-metallic mineral products	Germany	Italy	Czech Republic	Portugal
7	Metals & metal products	Germany	Italy	Slovakia	Slovenia
8	Machinery & equipment	Germany	Italy	Germany	Italy
9	Electrical machinery & optical equipment	Germany	France	Hungary	Finland
10	Transport equipment	Germany	France	Germany	Czech Republic
11	Furniture & other manufacturing (6)	Germany	Italy	Lithuania	Estonia
12	Non-energy mining & quarrying (7)	United Kingdom	Germany	Bulgaria	Poland
13	Energy (8)	United Kingdom	Germany	Poland	Lithuania
14	Recycling & water supply (9)	Germany	United Kingdom	Bulgaria	Slovakia
15	Construction	United Kingdom	Spain	Spain	Luxembourg
16	Motor trades	Germany	United Kingdom	Slovenia	Portugal
17	Wholesale trade	United Kingdom	Germany	Latvia	Estonia
18	Retail trade & repair	United Kingdom	Germany	France	United Kingdom
19	Hotels & restaurants	United Kingdom	France	Spain	Austria
20	Transport services	Germany	United Kingdom	Lithuania	Latvia
21	Communications & media (4)	Germany	United Kingdom	Bulgaria	Latvia
22	Business services	United Kingdom	Germany	United Kingdom	Luxembourg
23	Real estate, renting & R&D (10)	Germany	United Kingdom	Denmark	Sweden

(1) Greece and Malta, not available; Ireland and Cyprus, not available for specialisation ratio; Luxembourg, 2003.

(2) Latvia, 2003.

(3) Denmark, Latvia, Austria, Romania and Slovakia, not available; Portugal, 2003 for value added and not available for specialisation ratio.

(4) Luxembourg, not available.

(5) Portugal, 2003.

(6) Denmark and Ireland, not available; Bulgaria, 2003.

(7) Portugal, not available.

(8) Bulgaria, Denmark, Ireland, Cyprus, Latvia, Austria, Portugal, Romania and Slovakia, not available; Luxembourg, not available for specialisation ratio.

(9) Denmark and Cyprus, not available; Bulgaria, 2003.

(10) Cyprus and Luxembourg, not available.

Source: Eurostat (SBS)

Table 1.4 presents, for the activity aggregates used in the sectoral chapters of this publication, information on the two countries with the highest levels of value added. It shows that Germany was ranked either first or second for the vast majority of activities, with the only exceptions being construction and hotels and restaurants (Chapter 19). Italy was among the two largest producers for six of the industrial activities, while the United Kingdom was one of the two principal generators of added value for each of the service sector chapters.

Relative specialisation ratios are calculated for each Member State as the share of a particular activity in non-financial business economy value added. This share is divided by the same ratio for the EU-27 to create a final indicator that is expressed as a ratio in percentage terms (values above 100 % indicating a relative specialisation in relation to the EU-27 average): Table 1.4 also shows the most specialised Member States for each activity. Some of the larger Member States also appeared as the most specialised countries within a range of activities, including Germany for the manufacture of machinery and equipment (Chapter 8) and transport equipment, Spain for the construction sector and hotels and restaurants (Chapter 19), and the United Kingdom for business services. Nevertheless, particularly in industrial activities, several of the Member States that joined the EU in 2004 or 2007 are among the most specialised, with Lithuania, Bulgaria and Latvia frequently appearing as the most or second most specialised country.

Table 1.5

**Largest and most specialised activities (on the basis of value added for sectoral chapter headings and value added specialisation ratios relative to the EU-27 for sectoral chapter headings), 2004**

	<b>Largest</b>	<b>Second largest</b>	<b>Most specialised</b>	<b>Second most specialised</b>
<b>BE</b>	Business services	Wholesale trade	Chemicals, rubber & plastics	Recycling & water supply
<b>BG (1)</b>	Communications & media	Transport services	Non-energy mining & quarrying	Textiles, clothing, leather & footwear
<b>CZ</b>	Business services	Wholesale trade	Other non-metallic mineral products	Metals & metal products
<b>DK (2)</b>	Business services	Wholesale trade	Real estate, renting & R&D	Transport services
<b>DE</b>	Business services	Wholesale trade	Transport equipment	Machinery & equipment
<b>EE</b>	Wholesale trade	Transport services	Wood & paper	Textiles, clothing, leather & footwear
<b>IE (3)</b>	Chemicals, rubber & plastics	Business services	:	:
<b>EL</b>	:	:	:	:
<b>ES</b>	Construction	Business services	Construction	Other non-metallic mineral products
<b>FR</b>	Business services	Retail trade & repair	Retail trade & repair	Business services
<b>IT</b>	Business services	Construction	Textiles, clothing, leather & footwear	Furniture & other manufacturing
<b>CY (4)</b>	Construction	Hotels & restaurants	:	:
<b>LV (5)</b>	Wholesale trade	Transport services	Wood & paper	Wholesale trade
<b>LT</b>	Energy	Wholesale trade	Textiles, clothing, leather & footwear	Energy
<b>LU (6)</b>	Business services	Construction	Transport services	Metals & metal products
<b>HU</b>	Electrical machinery & optical equipment	Business services	Electrical machinery & optical equipment	Energy
<b>MT</b>	:	:	:	:
<b>NL</b>	Business services	Wholesale trade	Wholesale trade	Transport services
<b>AT (7)</b>	Business services	Wholesale trade	Wood & paper	Hotels & restaurants
<b>PL</b>	Energy	Wholesale trade	Non-energy mining & quarrying	Energy
<b>PT (8)</b>	Wholesale trade	Construction	Other non-metallic mineral products	Recycling & water supply
<b>RO (7)</b>	Wholesale trade	Transport services	Non-energy mining & quarrying	Recycling & water supply
<b>SI</b>	Wholesale trade	Chemicals, rubber & plastics	Recycling & water supply	Textiles, clothing, leather & footwear
<b>SK (7)</b>	Wholesale trade	Metals & metal products	Recycling & water supply	Metals & metal products
<b>FI</b>	Business services	Electrical machinery & optical equipment	Wood & paper	Electrical machinery & optical equipment
<b>SE</b>	Business services	Wholesale trade	Wood & paper	Non-energy mining & quarrying
<b>UK</b>	Business services	Wholesale trade	Business services	Hotels & restaurants

(1) Energy, not available; furniture & other manufacturing and recycling & water supply, 2003.

(2) Textiles, clothing, leather & footwear, furniture & other manufacturing, energy and recycling & water supply, not available.

(3) Furniture & other manufacturing and energy, not available for value added.

(4) Energy, recycling & water supply and real estate, renting & R&D, not available for value added.

(5) Textiles, clothing, leather & footwear and energy, not available; food, beverages & tobacco, 2003.

(6) Wood & paper, energy, communications & media and real estate, renting & R&D, not available; textiles, clothing, leather & footwear and energy, not available for specialisation ratio; all data, 2003.

(7) Textiles, clothing, leather & footwear and energy, not available.

(8) Non-energy mining & quarrying and energy, not available; textiles, clothing, leather & footwear, 2003 for value added and not available for specialisation ratio; chemicals, rubber & plastics, 2003.

Source: Eurostat (SBS)

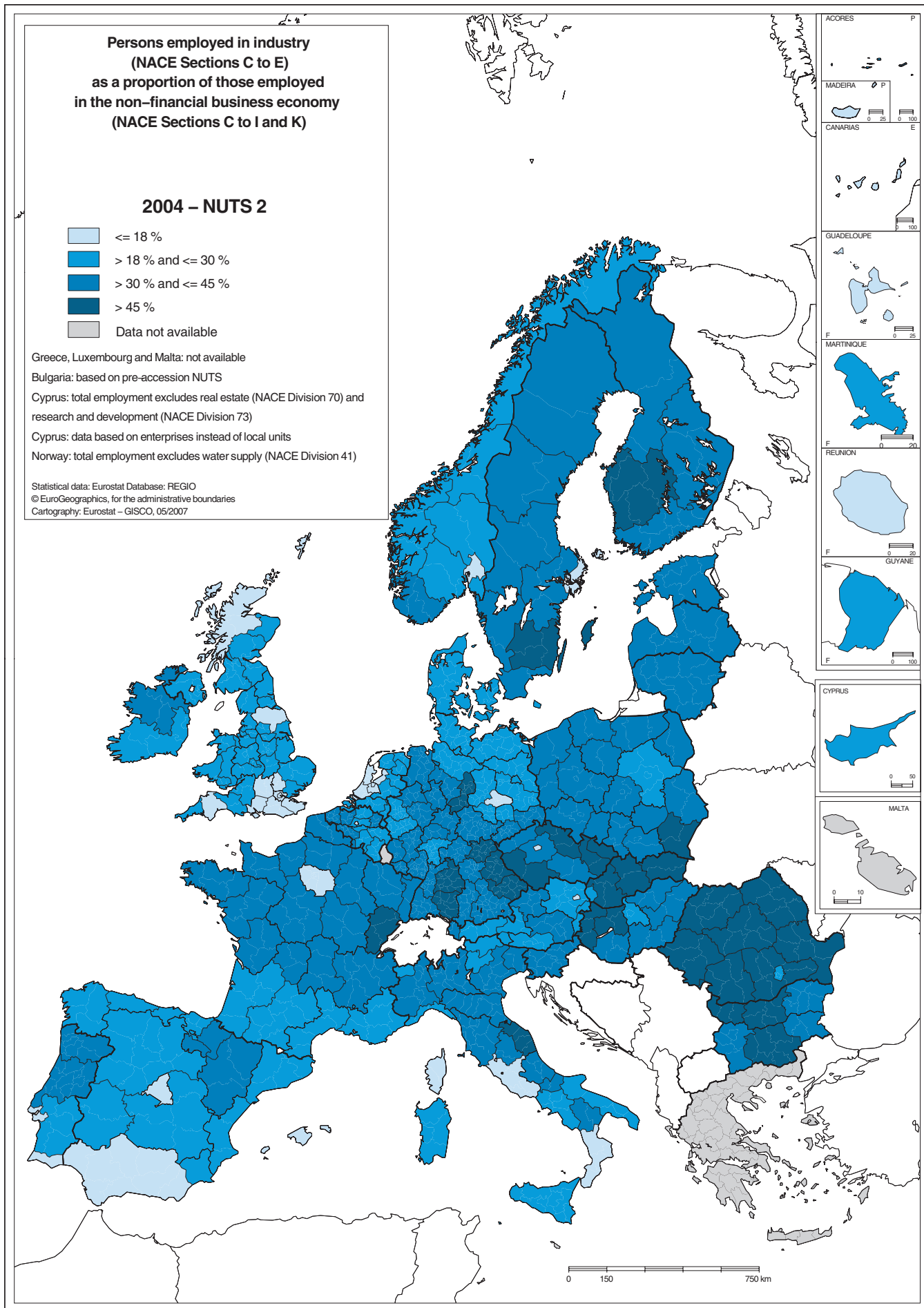
Table 1.5 also presents information on the largest activities and those with the highest specialisation ratios, this time structured by Member State instead of activity aggregate. This information confirms some regional patterns: for example, several Baltic, Scandinavian and alpine Member States were relatively specialised in the manufacture of wood and paper products (see Chapter 4), while mining (of energy and non-energy products) was relatively important in several central and eastern European countries (Bulgaria, Lithuania, Poland and Romania). The specialisation trends cited above are to a large degree related to endowments of natural resources. However, there are other factors that may play a role, such as the availability of skills, the breakdown of costs, access to infrastructure, or impediments to doing

business created by legislation. These may explain, for example, why the textiles, clothing, leather and footwear manufacturing sector (see Chapter 3) is no longer an activity dominated by the Mediterranean Member States of Italy, Portugal and Spain, as production is increasingly moved to eastern Europe (and beyond) in search of lower labour costs.

#### **SPECIALISATION AT A REGIONAL LEVEL**

Regional structural business statistics provide data with a detailed sectoral breakdown which can be used to study the nature, characteristics and evolution of the regional business economy for example in relation to the European Union's economic and regional policies.

The maps on pages 15 and 16 show the proportion of the non-financial business economy workforce occupied within the industrial and non-financial services sectors in 2004 (note that a similar map for the construction sector is presented within Chapter 15). There is a clear pattern of industrial employment being concentrated within parts of Germany, central and eastern Europe. There were a few regions where industrial employment accounted for more than 50 % of the regional workforce in 2004; these were exclusively located in Bulgaria, Romania and Slovakia.



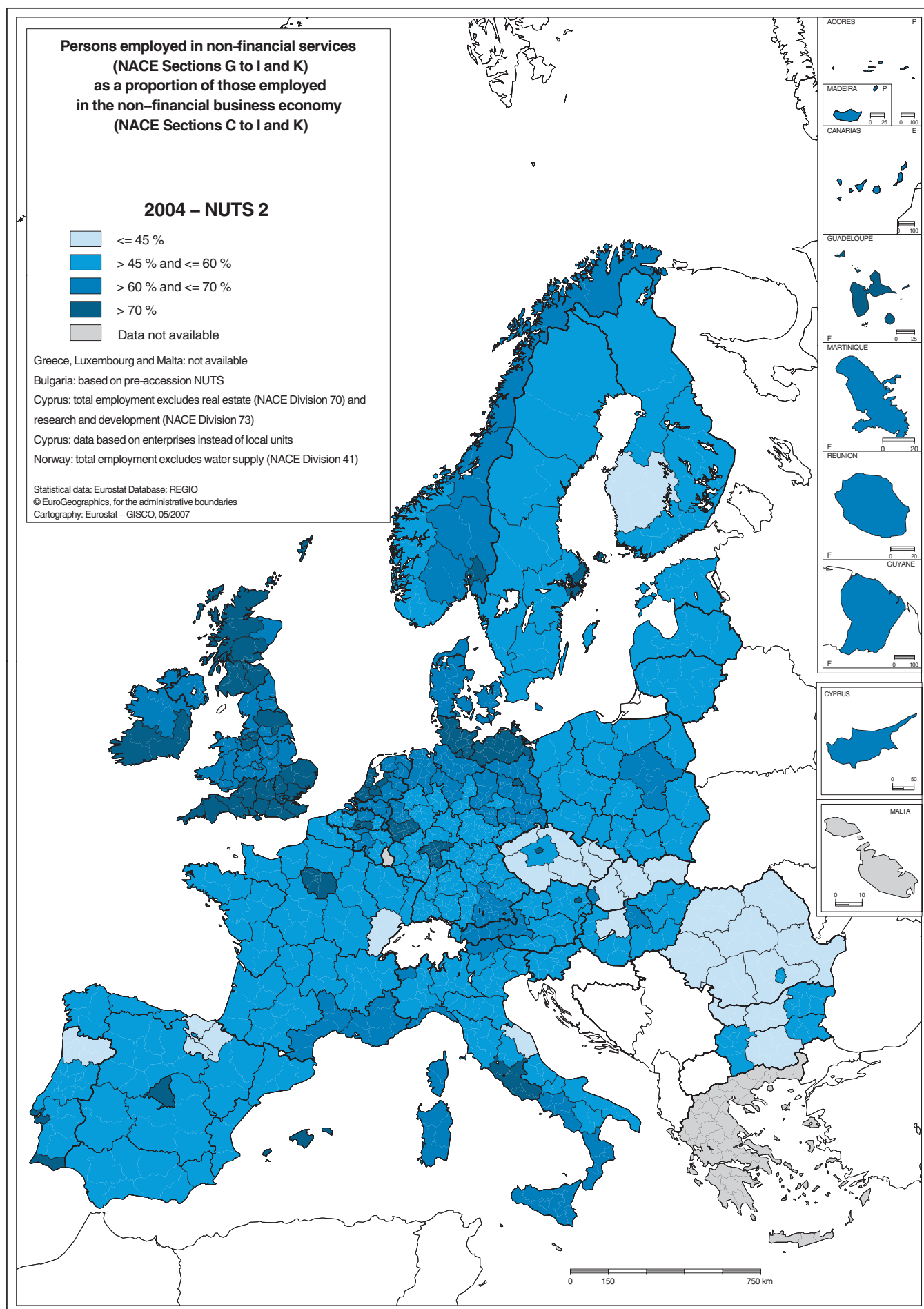


Table 1.6

**Three most specialised regions (NUTS 2 for sectoral chapter headings), EU-27 and Norway, 2004  
(% share of non-financial business economy employment) (1)**

Chapter	Most	Second	Third
<b>2 Food, beverages &amp; tobacco</b>	Bretagne (FR)	Podlaskie (PL)	La Rioja (ES)
<b>3 Textiles, clothing, leather &amp; footwear</b>	Norte (PT)	Nord-Est (RO)	Nord-Vest (RO)
<b>4 Wood &amp; paper</b>	Itä-Suomi (FI)	Norra Mellansverige (SE)	Mellersta Norrland (SE)
<b>5 Chemicals, rubber &amp; plastics</b>	Rheinessen-Pfalz (DE)	Alsace (FR)	Auvergne (FR)
<b>6 Other non-metallic mineral products</b>	Centro (PT)	Swietokrzyskie (PL)	Prov. Namur (BE)
<b>7 Metals &amp; metal products</b>	Vychodne Slovensko (SK)	Arnsberg (DE)	Norra Mellansverige (SE)
<b>8 Machinery &amp; equipment</b>	Tübingen (DE)	Unterfranken (DE)	Stuttgart (DE)
<b>9 Electrical machinery &amp; optical equipment</b>	Zapadne Slovensko (SK)	Oberpfalz (DE)	Mittelfranken (DE)
<b>10 Transport equipment</b>	Braunschweig (DE)	Stuttgart (DE)	Niederbayern (DE)
<b>11 Furniture &amp; other manufacturing</b>	Warminko-Mazurskie (PL)	Friuli-Venezia Giulia (IT)	Nord-Vest (RO)
<b>12 Non-energy mining &amp; quarrying</b>	Övre Norrland (SE)	Dolnoslaskie (PL)	Guyane (FR)
<b>13 Energy</b>	Slaskie (PL)	Sud-Vest Oltenia (RO)	Sud - Muntenia (RO)
<b>14 Recycling &amp; water supply</b>	Stredne Slovensko (SK)	Vychodne Slovensko (SK)	Sud-Vest Oltenia (RO)
<b>15 Construction</b>	País Vasco (ES)	Canarias (ES)	Andalucía (ES)
<b>16 Motor trades</b>	Brandenburg - Südwest (DE)	Réunion (FR)	Guyane (FR)
<b>17 Wholesale trade</b>	Flevoland (NL)	Región de Murcia (ES)	Prov. Vlaams-Brabant (BE)
<b>18 Retail trade &amp; repair</b>	Ciudad Autónoma de Ceuta (ES)	Ciudad Autónoma de Melilla (ES)	Merseyside (UK)
<b>19 Hotels &amp; restaurants</b>	Illes Balears (ES)	Algarve (PT)	Provincia Autonoma Bolzano/Bozen (IT)
<b>20 Transport services</b>	Åland (FI)	Bratislavsky kraj (SK)	Mazowieckie (PL)
<b>21 Communications &amp; media</b>	Köln (DE)	Lazio (IT)	Île de France (FR)
<b>22 Business services</b>	Inner London (UK)	Utrecht (NL) Berkshire, Buckinghamshire & Oxfordshire (UK)	
<b>23 Real estate, renting &amp; R&amp;D</b>	Inner London (UK)	Latvia (LV) Berkshire, Buckinghamshire & Oxfordshire (UK)	

(1) Greece, Luxembourg and Malta, not available; Bulgaria is based on pre-accession NUTS; Cyprus, not available for real estate, renting and R&D; Norway, not available for recycling and water supply; Cyprus, based on enterprises and not local units.

Source: Eurostat (SBS)

In contrast, employment within the non-financial services sector (see Map 1.2) was often concentrated in the capital city, for example, some 88.9 % of the total in Inner London in 2004, while upwards of 75 % of the workforce were employed in non-financial services in a number of other regions which include the capital, such as Noord-Holland (the Netherlands), Berlin (Germany), Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest (Belgium), Île de France (France), Comunidad de Madrid (Spain) and Wien (Austria).

Table 1.6 shows, for each of the activity aggregates used for the sectoral chapters, the three most specialised NUTS 2 level regions – on the basis of employment specialisation. As mentioned above, geographical and geological factors may help explain why some regions are particularly specialised in activities like mining and quarrying, energy, or forest-based activities. For example, Slaskie (Poland), Sud-Vest Oltenia and Sud - Muntenia (both Romania) are centres for mining and energy activities, while over 70 % of Norra Mellansverige (Sweden) and Itä-Suomi (Finland) are covered by forests, around which much of the local economy has developed. In a similar vein, it is not surprising that Bretagne (France) is the most specialised region for food and beverage manufacturing, as it is a largely rural area with a high proportion of agricultural land. Another factor that can play a key role in driving relative specialisation is weather, landscape and location: the most specialised regions for hotels and restaurants included the Illes Balears (Spain), the Algarve (Portugal) and

the Provincia Autonoma Bolzano/Bozen (northern Italy), all of which are popular destinations for tourists. A critical mass of clients (other enterprises or households/consumers) within close proximity, or a supply of highly skilled labour can also be drivers of specialisation, for example, research parks developing near to universities, or computer services, communications and media, and other business services being concentrated around capital cities and other densely populated regions. Sometimes the concentration of enterprises within a particular activity results in strategic clusters emerging to provide products and services designed specifically for a particular activity. For example, manufacturers of motor vehicle parts and accessories are clustered around Stuttgart and Wolfsburg in the Braunschweig region, while communication and media related enterprises are concentrated around Köln (all Germany), and many aerospace suppliers are located around Toulouse in the Midi-Pyrénées (France).

**Table 1.7**  
Selected top/main manufacturing products sold in value terms, EU-27, 2006 (1)

	Prodcom code	Value (EUR million)
Motor vehicles with a petrol engine > 1500 cm <sup>3</sup> (including motor caravans of a capacity > 3000 cm <sup>3</sup> )	34.10.22.30	119 405
Motor vehicles with a diesel or semi-diesel engine > 1500 cm <sup>3</sup> but <= 2500 cm <sup>3</sup>	34.10.23.30	96 646
Beer made from malt (excluding non-alcoholic beer, beer containing <= 0.5% by volume of alcohol, alcohol duty)	15.96.10.00	29 320
Radio transmission apparatus with reception apparatus	32.20.11.70	26 906
Fresh bread containing by weight in the dry matter state <= 5% of sugars and <= 5% of fat	15.81.11.00	23 219
Ready-mixed concrete	26.63.10.00	22 686
Grated; powdered; blue-veined and other non-processed cheese (excluding fresh cheese; whey cheese and curd)	15.51.40.50	21 623
Cartons; boxes and cases of corrugated paper or paperboard	21.21.13.00	18 809
Cake and pastry products; other baker's wares with added sweetening matter	15.81.12.00	18 201
Sausages not of liver	15.13.12.15	17 686
Goods vehicles with a diesel or semi-diesel engine, of a gross vehicle weight <= 5 tonnes (excluding dumpers for off-highway use)	34.10.41.10	16 850
Motor vehicles with a diesel or semi-diesel engine <= 1500 cm <sup>3</sup>	34.10.23.10	16 241
Grey Portland cement (including blended cement)	26.51.12.30	15 226
Hot rolled flat products in coil (wide strip) of a width of 600 mm or more (of steel other than of stainless steel or of high speed steel)	27.10.60.20	14 801
Vehicle compression-ignition internal combustion piston engines (diesel or semi-diesel) (excluding for railway or tramway rolling stock)	34.10.13.00	14 712
Prefabricated structural components for building of cement	26.61.12.00	13 448
Cigarettes containing tobacco or mixtures of tobacco and tobacco substitutes (excluding tobacco duty)	16.00.11.50	13 198
Vehicle reciprocating piston engines of a cylinder capacity > 1000 cm <sup>3</sup>	34.10.12.00	12 581
Motor vehicles with a diesel or semi-diesel engine > 2500 cm <sup>3</sup>	34.10.23.40	12 489
Fresh or chilled cuts of beef and veal	15.11.11.90	12 442

(1) Excluding products of a generic nature (other), sales of services such as repair, maintenance and installation; estimates.  
Source: Eurostat (PRODCOM)

**Table 1.8**  
Selected manufacturing products sold in volume and value terms, EU-27, 2006 (1)

	Prodcom code	Volume (millions)	Unit	Value (EUR million)
Grey Portland cement (including blended cement)	26.51.12.30	216 165	kg	15 225
Flat semi-finished products (slabs) (of stainless steel)	27.10.32.10	600	kg	1 215
Champagne (important: excluding alcohol duty)	15.93.11.30	244	litres	4 189
Perfumes	24.52.11.50	35	litres	471
Coniferous wood; sawn or chipped lengthwise; sliced or peeled; of a thickness > 6mm; planed (excluding end-jointed or sanded)	20.10.10.34	19	m <sup>3</sup>	3 670
Oxygen	24.11.11.70	27 393	m <sup>3</sup>	2 063
Cigarettes containing tobacco or mixtures of tobacco and tobacco substitutes (excluding tobacco duty)	16.00.11.50	795 205	units	13 190
Flat panel colour TV receivers, LCD/plasma, etc. excluding television projection equipment, apparatus with video recorder/player, video monitors, television receivers with integral tube	32.30.20.60	13	units	8 178

(1) Excluding products of a generic nature (other), sales of services such as repair, maintenance and installation; estimates.  
Source: Eurostat (PRODCOM)

### MOST PRODUCED PRODUCTS

PRODCOM is a system for the collection and dissemination of statistics on the production of goods in the EU-27. Information provided in PRODCOM includes data for the value and volume of production in the Member States that has been sold by their producers in a particular reference year. Commodities are specified in the PRODCOM list, which includes around 4 500 products, updated on an annual basis. The products are listed according to an eight-digit code, of which the first six are directly aligned with the statistical classification of products by activity in the European Community, the CPA.

Table 1.7 shows a selection of the 20 products with the highest values of production sold in the EU-27 in 2006, excluding a few products: those of a generic nature, sales of services (such as repair, maintenance and installation), and confidential values. As can be seen, transport equipment products (CPA 34) dominated, occupying the first two places, with a further five products among the top twenty. Table 1.8 illustrates the information that is available in volume terms, where the measurement unit used varies depending on the nature of the product.

### 1.3: COSTS, PRODUCTIVITY AND PROFITABILITY

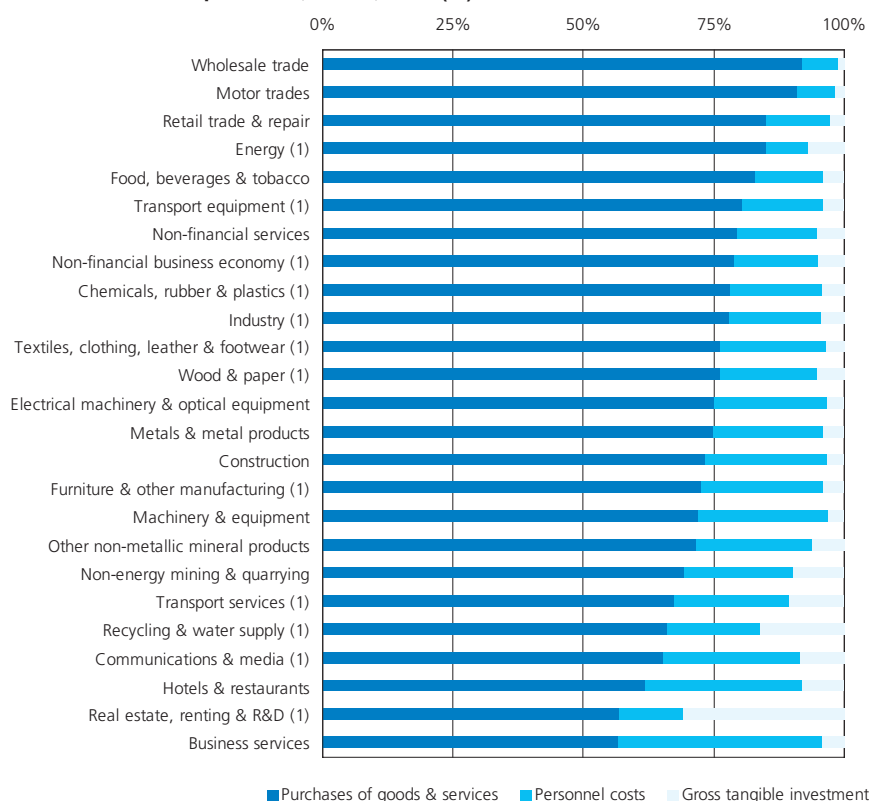
Competitiveness at the sectoral and micro-economic level is often defined as the ability of a particular activity or enterprise to improve its position in (global) markets. A high degree of prominence is often given to productivity gains when trying to explain how particular activities or enterprises become more competitive. This section looks in more detail at cost profiles (in particular the cost of energy and labour), productivity and profitability issues.

Labour market reforms enacted across many Member States have recently been accompanied by a tendency towards higher employment rates (in other words, a greater proportion of the population being in work). These increases (which at the same time swell tax revenues and reduce social protection expenditure) are seen as an integral part of the 'strategy for jobs and growth'. The parallel goal of raising productivity levels (or the added value generated by each person employed) is likely to stem from areas such as the re-organisation and re-allocation of production, improved labour skills, or the introduction of new products and processes (in particular through information and communication technologies).

#### TOTAL EXPENDITURE

A breakdown of total expenditure sheds some light on the different cost structures that exist across activities in terms of operating and capital expenditure. These statistics provide an insight into the capital/labour intensities of different sectors and the extent to which they convert or distribute products. Figure 1.10 shows the cost structures of different activities, with a breakdown of total expenditure into its three components, namely, purchases of goods and services, personnel costs, and gross tangible investment. On average, some 78.7 % of all EU-27 total expenditure in the non-financial business economy was allocated to purchases of goods and services in 2004, while 16.4 % was accounted for by personnel costs and the remaining 4.9 % by gross tangible investment. The breakdowns for industry and non-financial services were both similar to the overall figures for the whole of the non-financial business economy. However, there was a distinct split within non-financial service activities, as the three distributive trades activities recorded the highest proportions of purchases of goods and services within total expenditure (upwards of 90 % for both wholesale and motor trades); perhaps no surprise, given that these activities are characterised by purchases for resale without transformation. With the exception of distributive trades, the other non-financial

Figure 1.10 Structure of total expenditure, EU-27, 2004 (%)



(1) Rounded estimates based on non-confidential data. Source: Eurostat (SBS)

services were all relatively labour-intensive, with personnel costs accounting for a high proportion of total expenditure in 2004; this ratio rose as high as 39.3 % for business services for the EU-27.

Given the extremely high share of purchases of goods and services, unsurprisingly distributive trades recorded the lowest rate of investment intensity (as defined by the share of gross tangible investment in total expenditure) in 2004, while rates were also relatively low for construction, where the vast majority of enterprises are relatively small and specialised in activities such as plastering, plumbing, electrical installations. By the same measure, investment intensity was low within a number of manufacturing activities, such as machinery and equipment manufacturing, electrical machinery and optical equipment manufacturing, the manufacture of textiles, clothing, leather and footwear, or furniture and other manufacturing industries. The most investment-intensive activity (as measured by a relatively high share of gross tangible investment in total expenditure) was real estate, renting and R&D.

This is perhaps not surprising as many enterprises within these activities are owners of the capital goods that they sell, rent and lease. In a similar vein, the investment intensity of hotels and restaurants was also relatively high, due to the relatively high degree of investment required in buildings, both in terms of initial purchase or construction, and for major renovations. Other activities that were relatively investment-intensive included those requiring specialist machinery and equipment or investment in infrastructure networks (for example, water, energy and telecommunications). It should be noted that the level of investments in a given year could be volatile, in particular on a detailed level (activity/country), with a year with large investments followed by a period with little or no investments.

Most EU-15 Member States reported personnel costs accounting for a relatively high share of total expenditure in 2004, with the highest proportion (19.2 %) recorded for Germany, while shares of 18 % or more were also recorded in Sweden, Austria, France and the United Kingdom – see Table 1.9 <sup>(6)</sup>. However, it was Cyprus that registered the highest proportion of total costs being devoted to personnel (21.1 %). Slovenia reported a cost structure that was similar to the EU-27 average (16.4 %), with personnel costs accounting for 15.7 % of total expenditure, while the relative importance of personnel costs was considerably lower for the remaining 11 Member States that joined the EU since 2004, ranging from 11.3 % in Lithuania down to 7.1 % in Bulgaria. In contrast many of these Member States recorded a particularly high level of investment intensity. Romania recorded a 12.9 % ratio for investment intensity in 2004 that was almost three times as high as the EU-27 average (4.9 %). Poland was the only one of the 12 Member States that joined the EU since 2004 to report a level of investment intensity that was below the EU-27 average. Among the EU-15 Member States, the share of gross tangible investment in total expenditure was relatively high in Denmark, Austria and Portugal (7 % or above), while the lowest shares (4 % or lower) were recorded for Germany and the Benelux countries.

### ENERGY AND RAW MATERIAL COSTS

One particular aspect of purchases of goods and services that has come under close scrutiny in the past couple of years is the price of energy and mineral products. There are considerable challenges in ensuring a security of supply with respect to both energy products and a range of other important inputs, including metals and minerals. Reliable supplies are often considered to be one of the key elements for the competitiveness of an economy, as many products are not available within the Member States (or they exist in such small volumes that it is not economic to mine/extract them). This reliance on imports is often quite striking, as 37 % of the world's copper was mined in Chile in 2004, while 40 % of the world's bauxite was from Australia, 53 % of its chromium from South Africa, and 87 % of its tungsten from China, while most EU-27 oil and gas imports originated from Russia, Norway and Saudi Arabia <sup>(7)</sup>.

<sup>(6)</sup> Ireland, excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E); Cyprus, excluding real estate activities (NACE Division 70) and research and development (NACE Division 73); Luxembourg, 2003; Greece and Malta, not available.

<sup>(7)</sup> Securing raw material supply for EU industries, press release by European Commission Vice President Günter Verheugen, 5 June 2007, based on World mining data (2006).

**Table 1.9** Total expenditure, non-financial business economy, 2004 (%)

	Value (EUR million)				Share (% of total expenditure)		
	Total expenditure	Purchases of goods & services	Personnel costs	Gross tangible investment	Purchases of goods & services	Personnel costs	Gross tangible investment
<b>EU-27</b>	18 160 000	14 300 000	2 970 000	890 000	78.7	16.4	4.9
<b>BE</b>	652 351	544 864	82 817	24 670	83.5	12.7	3.8
<b>BG</b>	52 432	44 516	3 726	4 190	84.9	7.1	8.0
<b>CZ</b>	228 808	191 297	25 204	12 307	83.6	11.0	5.4
<b>DK</b>	333 444	245 017	58 360	30 067	73.5	17.5	9.0
<b>DE</b>	3 495 062	2 684 098	670 154	140 810	76.8	19.2	4.0
<b>EE</b>	25 335	20 832	2 623	1 880	82.2	10.4	7.4
<b>IE (1)</b>	:	:	:	:	82.2	12.9	4.9
<b>EL</b>	:	:	:	:	:	:	:
<b>ES</b>	1 673 619	1 326 424	256 754	90 442	79.3	15.3	5.4
<b>FR</b>	2 812 442	2 166 296	515 014	131 132	77.0	18.3	4.7
<b>IT</b>	2 266 202	1 873 011	291 628	101 562	82.6	12.9	4.5
<b>CY (2)</b>	:	:	:	:	73.3	21.1	5.7
<b>LV</b>	23 808	19 227	2 217	2 364	80.8	9.3	9.9
<b>LT</b>	31 855	26 034	3 587	2 234	81.7	11.3	7.0
<b>LU (3)</b>	46 586	38 166	6 989	1 431	81.9	15.0	3.1
<b>HU</b>	190 784	159 263	18 776	12 745	83.5	9.8	6.7
<b>MT</b>	:	:	:	:	:	:	:
<b>NL</b>	890 498	720 259	138 295	31 944	80.9	15.5	3.6
<b>AT</b>	414 218	308 077	75 858	30 283	74.4	18.3	7.3
<b>PL</b>	401 115	343 530	38 722	18 864	85.6	9.7	4.7
<b>PT</b>	289 582	230 587	38 734	20 261	79.6	13.4	7.0
<b>RO</b>	118 661	92 496	10 862	15 302	78.0	9.2	12.9
<b>SI</b>	53 295	42 111	8 368	2 815	79.0	15.7	5.3
<b>SK</b>	61 932	51 174	6 321	4 437	82.6	10.2	7.2
<b>FI</b>	275 858	220 707	42 977	12 175	80.0	15.6	4.4
<b>SE</b>	518 723	390 587	97 050	31 087	75.3	18.7	6.0
<b>UK</b>	2 792 378	2 136 307	509 843	146 228	76.5	18.3	5.2

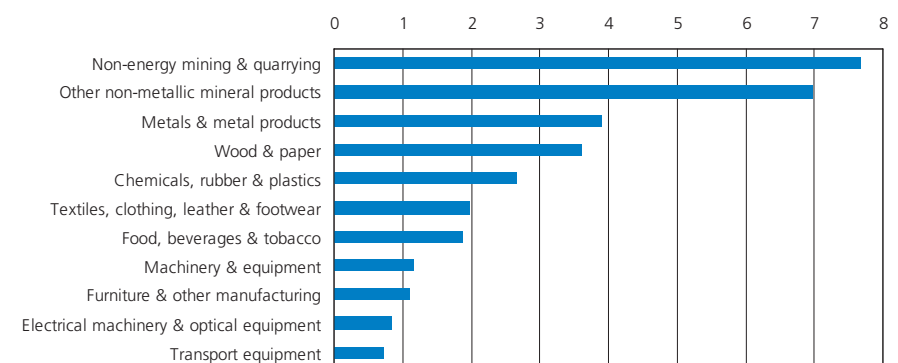
(1) Excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E).

(2) Excluding real estate activities (NACE Division 70) and research and development (NACE Division 73).

(3) 2003.

Source: Eurostat (SBS)

**Figure 1.11** Purchases of energy products, average for available Member States, 2004 (% share of total expenditure) (1)



(1) Average for Belgium, Czech Republic, Germany, Estonia, Spain, France, Italy, Cyprus, Lithuania, Hungary, Netherlands, Finland and United Kingdom; NACE Sections C to E, excluding energy, recycling and water supply (NACE Subsection CA and Divisions 23, 37, 40 and 41).

Source: Eurostat (SBS)



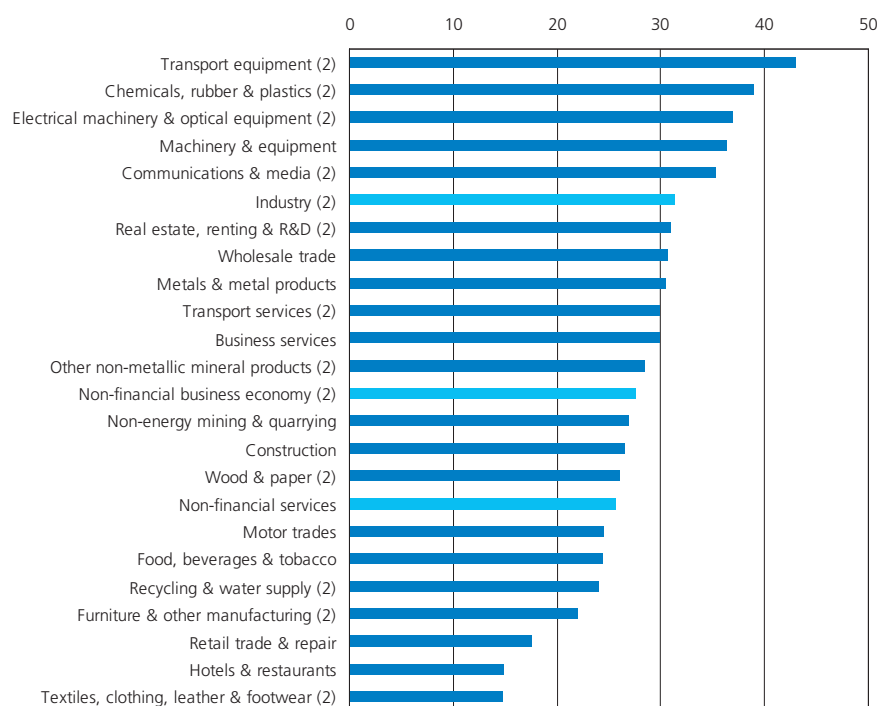
Rising global demand for many of these raw materials has been driven by the unprecedented expansion of output in several emerging economies, such as China, India and Brazil. Increased demand on the one hand, as well as political instability in producing countries on the other, can, to some degree, be used to explain the rapidly spiralling price increases that were observed for oil and gas between 2002 and 2006. For more information concerning the evolution of crude oil prices see Chapter 13.

The rising price of oil had an impact on the price of substitutes, and also translated into price increases in other downstream activities. For example, rising oil prices have been used to explain gas price increases, as the price of gas is often set in long-term contracts that are linked to the price of oil. Oil price increases were also passed down the production chain in the form of higher electricity prices, thus affecting a wide range of downstream activities, in particular, activities which are energy-intensive (such as the manufacture of iron and steel, aluminium, concrete or ceramics), or those industries that use oil and its derivatives as inputs in their own manufacturing processes (for example, the manufacture of chemicals, rubber and plastics).

A breakdown of industrial purchases of energy gives an indication of their importance in the cost structures of different activities. The data shown are based on averages constructed on the basis of available data <sup>(8)</sup> for 2004. Across industrial activities, the chemicals, rubber and plastics (22.9 %) and metals and metal products (20.8 %) manufacturing sectors accounted for the highest proportions of industrial energy purchases. When viewed in terms of the relative importance of energy costs in total expenditure – see Figure 1.11 – the most energy-intensive activities included non-energy mining and quarrying and the manufacture of other non-metallic mineral products, where energy costs accounted for upwards of 7 % of expenditure. These ratios were almost double those recorded in the next most energy-intensive activities, namely, the production of metals and metal products, and the manufacture of wood and paper, where energy accounted for just less than 4 % of expenditure.

<sup>(8)</sup> Averages based on Belgium, Czech Republic, Germany, Estonia, Spain, France, Italy, Cyprus, Lithuania, Hungary, the Netherlands, Finland and the United Kingdom; data cover total industry (NACE Sections C to E), excluding energy, recycling and water supply (NACE Subsection CA and Divisions 23, 37, 40 and 41).

**Figure 1.12** Average personnel costs per employee, EU-27, 2004 (EUR thousand per employee) (1)



(1) Energy, not available.  
 (2) Rounded estimate based on non-confidential data.  
 Source: Eurostat (SBS)

**PERSONNEL COSTS**

In recent years, many governments have reformed their labour market policy, in the face of competition from countries with lower labour costs, and with the goal of avoiding a pensions’ crisis through encouraging higher employment rates.

Personnel costs are defined as the total remuneration, in cash or in kind, payable by an employer to an employee (permanent and temporary employees as well as home workers) in return for work done by the latter, including taxes and employees’ social security contributions that are retained by the unit, and employer’s compulsory and voluntary social contributions. Note that there may be costs associated with employing staff that are not covered by personnel costs, for example, training, recruitment costs, or the provision of working clothes.

As has been shown, personnel costs accounted for 16.4 % of the total expenditure in the EU-27’s non-financial business economy in 2004. In relation to the number of paid workers, personnel costs averaged EUR 27 600 per employee in the EU-27’s non-financial business economy. Average personnel costs for industrial activities were somewhat higher, at EUR 31 300 per employee, than those for construction (EUR 26 600) or non-financial services (EUR 25 700).

Across the activity aggregates used for the sectoral chapters in this publication <sup>(9)</sup>, personnel costs per employee were highest for the manufacture of transport equipment at EUR 43 000, falling to just one third of this level (EUR 14 800 per employee) for the manufacture of textiles, clothing, leather and footwear – see Figure 1.12. The ratio of average personnel costs per employee is calculated on the basis of headcounts for employees (as opposed to full-time equivalents), which is particularly important for several service sectors, where the propensity to employ persons on a part-time basis is often high – for example, hotels and restaurants and retail trade and repair. Indeed, these two sectors which reported the highest proportion of part-time employment also recorded the second and third lowest levels of average personnel costs per employee (across the activity aggregates used for the sectoral chapters).

Wages and salaries represented more than three quarters (78.0 %) of total personnel costs in the EU-27’s non-financial business economy in 2004, leaving 22.0 % of personnel costs committed to social security costs – see Figure 1.13. These social costs correspond to the value of costs incurred by employers in order to secure for their

<sup>(9)</sup> Energy, not available.

employees entitlements to social benefits, including schemes for pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, and family allowances, regardless of whether these are statutory, collectively agreed, contractual or voluntary in nature. Social security costs accounted for a relatively low share of total personnel costs in Denmark (8.0 %), Cyprus, Ireland, the United Kingdom and Luxembourg (2003) – between 11.9 % and 12.8 % <sup>(10)</sup>, while their relative importance rose to upwards of 30.0 % in France and Sweden. The proportion of total personnel costs that is accounted for by social security costs tends to be relatively uniform across activities within each Member State, as employers' contributions are often set on a statutory basis for the whole economy.

### PRODUCTIVITY

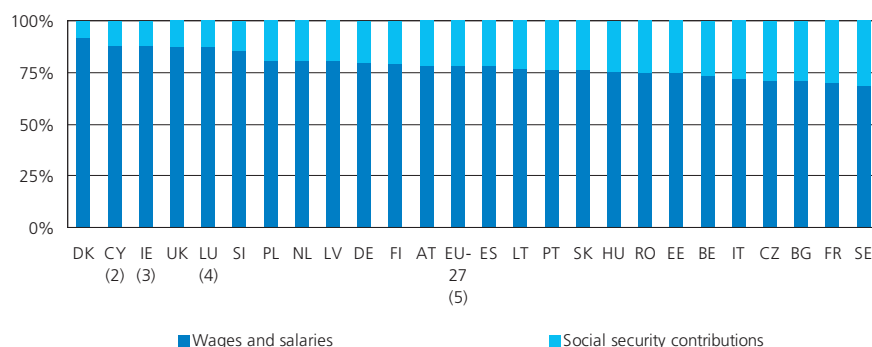
Productivity is a key measure of economic efficiency, showing how effectively economic inputs are converted into output. Apparent labour productivity is defined as the value added generated by each person employed (measured by headcounts): this measure is therefore limited insofar as it does not consider differences in the extent of part-time work across activities. Part-time workers are most frequent in several non-financial services, such as hotels and restaurants, retail trade, and certain business services (see Chapter 1.5).

Figure 1.14 shows that on average each person employed in the EU-27's non-financial business economy generated EUR 40 900 of value added in 2004; with apparent labour productivity higher for industrial activities (EUR 49 000) than for non-financial services (EUR 38 200) or for construction (EUR 33 000). Labour productivity tended to be highest among those sectors that are characterised as being capital-intensive or high-tech, for example, energy, real estate, renting and R&D, communications and media, or the manufacture of chemicals, rubber and plastics. It was lowest among labour-intensive activities, such as the manufacture of textiles, clothing, leather and footwear, or hotels and restaurants, where labour productivity levels were less than half the non-financial business economy average.

Another measure of productivity is the wage adjusted labour productivity ratio, defined as value added divided by personnel costs and subsequently adjusted by the share of paid employees in the total number of persons employed, or more simply: apparent labour

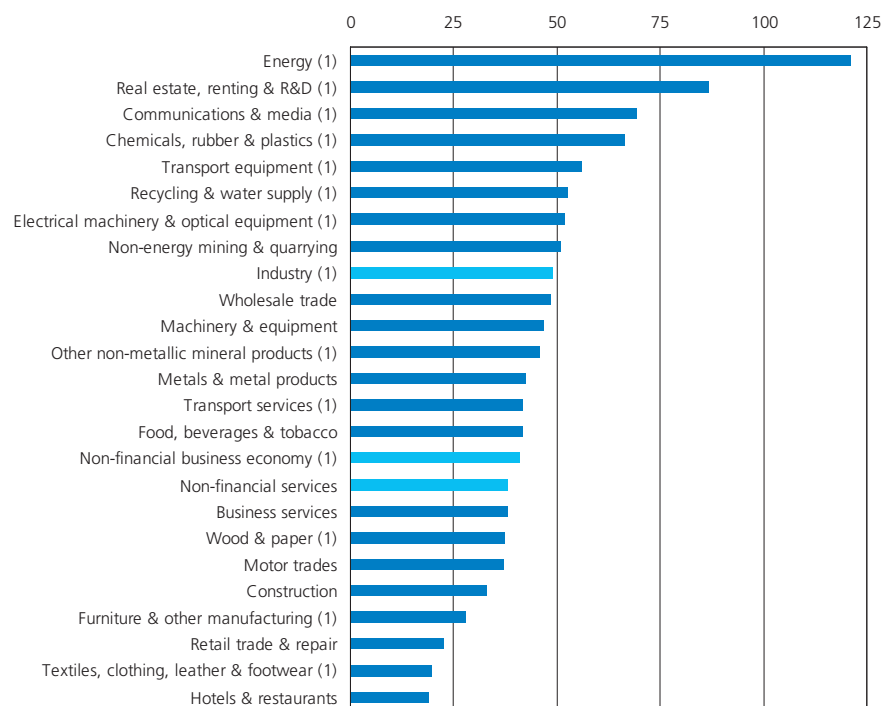
<sup>(10)</sup> Ireland, excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E); Cyprus, excluding real estate activities (NACE Division 70) and research and development (NACE Division 73); Luxembourg, 2003; Greece and Malta, not available.

**Figure 1.13**  
**Breakdown of personnel costs, non-financial business economy, 2004**  
**(% share of total personnel costs) (1)**



(1) Greece and Malta, not available.  
(2) Excluding real estate activities (NACE Division 70) and research and development (NACE Division 73).  
(3) Excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E).  
(4) 2003.  
(5) Rounded estimates based on non-confidential data.  
Source: Eurostat (SBS)

**Figure 1.14**  
**Apparent labour productivity, EU-27, 2004 (EUR thousand per person employed)**



(1) Rounded estimate based on non-confidential data.  
Source: Eurostat (SBS)

productivity divided by average personnel costs (expressed as a ratio in percentage terms). Given that this indicator is based on expenditure for labour input rather than a headcount of labour input, it is more relevant for comparisons across activities (or countries) with very different incidences of part-time employment or self-employment.

The wage adjusted labour productivity ratio for the EU-27's non-financial business economy stood at 148.0 % in 2004 (see Figure 1.15). Among the activity aggregates used for the sectoral chapters <sup>(11)</sup>, the highest ratio was recorded for real estate, renting and R&D, followed by several other capital-intensive activities, such as recycling and water supply, communications and media, and non-energy

<sup>(11)</sup> Energy, not available.

mining and quarrying. At the other end of the range, value added per person employed covered average personnel costs by less than 130 % for the machinery and equipment, transport equipment, retail trade and repair, furniture and other manufacturing, hotels and restaurants, and business services sectors, falling to a low of 123.7 % for construction.

The ranking of the sectoral chapters was similar whether based on apparent labour productivity or wage adjusted labour productivity. However, transport equipment manufacturing moved from fifth most productive to sixth least productive, once apparent labour productivity was adjusted for the average personnel costs (highest among all of the activity aggregates used for the sectoral chapters). On the other hand, motor trades, and textiles, clothing, leather and footwear manufacturing moved up in the ranking, the latter having recorded the lowest average personnel costs.

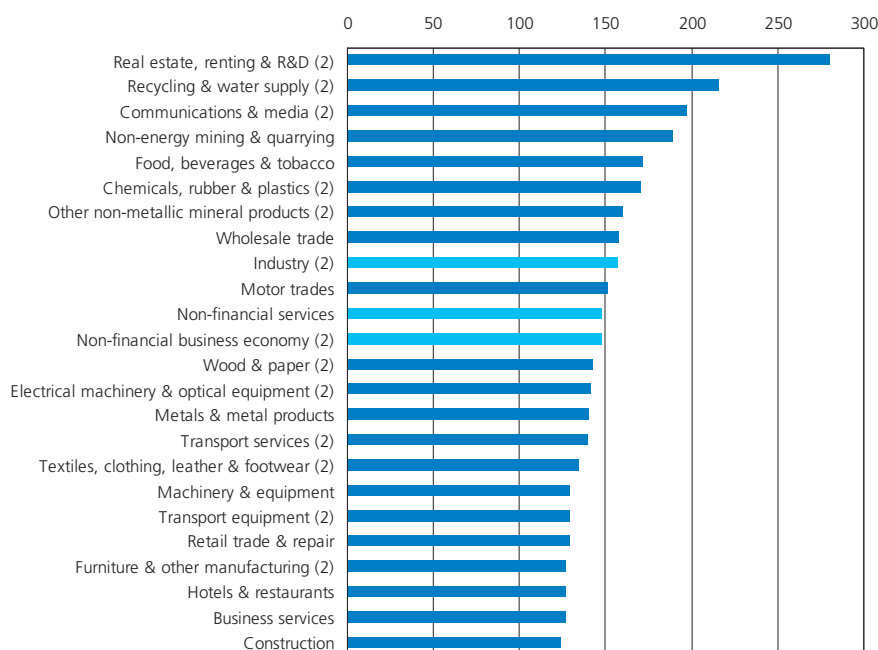
Across the Member States <sup>(12)</sup> (see Table 1.10) there were wide ranging differences in apparent productivity levels and average personnel costs; both tended to be higher among the EU-15 Member States. When average personnel costs were used to adjust apparent labour productivity, many of the EU-15 Member States reported relatively low wage adjusted productivity ratios; this was particularly notable for Italy, France, Sweden and Belgium.

**PROFITABILITY:  
THE GROSS OPERATING RATE**

The gross operating rate is defined as the gross operating surplus (value added at factor cost less personnel costs) divided by turnover; it is expressed as a percentage. The gross operating surplus measures the operating revenue that is left to compensate the capital factor input, after the labour factor input has been recompensed. The surplus is used to recompense the providers of own funds and debt, to pay taxes, and eventually for self-financing all or a part of investment. Although not always the case, the gross operating surplus will therefore generally be higher for capital-intensive activities and lower for those activities which have a relatively high proportion of their costs accounted for by personnel costs. The gross operating rate can be considered as one measure of profitability and is a key indicator for measuring competitiveness and enterprise success.

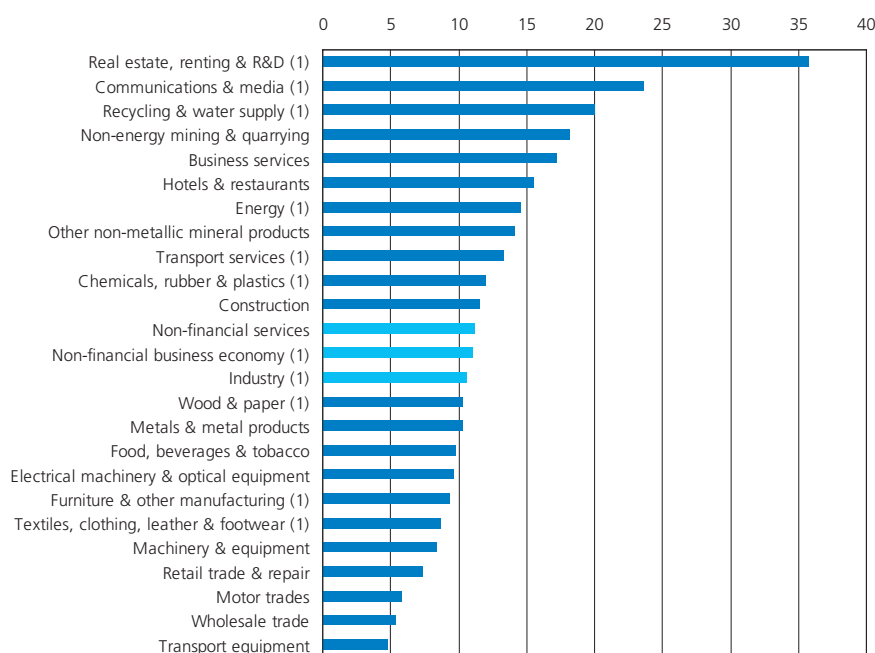
<sup>(12)</sup> Ireland, excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E); Cyprus, excluding real estate activities (NACE Division 70) and research and development (NACE Division 73); Luxembourg, 2003; Greece and Malta, not available.

**Figure 1.15**  
Wage adjusted labour productivity ratio, EU-27, 2004 (%) (1)



(1) Energy, not available.  
(2) Rounded estimate based on non-confidential data.  
Source: Eurostat (SBS)

**Figure 1.16**  
Gross operating rate, EU-27, 2004 (%)



(1) Rounded estimate based on non-confidential data.  
Source: Eurostat (SBS)

The EU-27's gross operating rate for the non-financial business economy was 11.0 % in 2004 (see Figure 1.16), while the rates for industry (10.6 %), construction (11.6 %) and non-financial services (11.2 %) were all closely grouped. In terms of the activity aggregates used for the sectoral chapters, the real estate, renting and R&D sector reported by far the highest gross

operating rate (35.8 %), more than 50 % higher than the second highest rate (23.6 %) for the communications and media sector. The lowest EU-27 gross operating rate in 2004 was recorded for the manufacture of transport equipment, where relatively high average personnel costs weigh heavily on the gross operating surplus.

Table 1.10

## Productivity and profitability, non-financial business economy, 2004

	Apparent labour productivity (EUR thousand per person employed)	Average personnel costs (EUR thousand per employee)	Wage adjusted labour productivity ratio (%)	Gross operating ratio (%)
<b>EU-27 (1)</b>	40.9	27.6	148.0	11.0
<b>BE</b>	58.4	42.0	138.8	8.3
<b>BG</b>	4.7	2.5	189.9	8.8
<b>CZ</b>	14.7	9.1	161.6	11.4
<b>DK</b>	61.6	37.7	163.1	12.2
<b>DE</b>	51.6	35.3	146.3	10.5
<b>EE</b>	13.2	7.0	188.6	9.7
<b>IE (2)</b>	81.7	32.8	249.1	19.1
<b>EL</b>	:	:	:	:
<b>ES</b>	35.7	24.2	147.5	11.7
<b>FR</b>	50.3	38.0	132.3	7.0
<b>IT</b>	38.6	29.7	129.9	11.4
<b>CY (3)</b>	30.7	20.4	150.1	13.6
<b>LV</b>	9.0	3.9	230.1	13.0
<b>LT</b>	8.8	4.7	187.8	10.5
<b>LU (4)</b>	56.9	37.4	152.3	8.7
<b>HU</b>	14.0	8.4	166.1	8.8
<b>MT</b>	:	:	:	:
<b>NL</b>	50.8	33.5	151.6	9.7
<b>AT</b>	52.2	35.7	146.1	11.0
<b>PL</b>	14.0	6.7	208.0	15.0
<b>PT</b>	21.9	14.4	151.7	8.9
<b>RO</b>	5.4	2.8	194.2	9.7
<b>SI</b>	23.8	16.3	145.7	9.3
<b>SK</b>	14.7	7.1	207.0	10.8
<b>FI</b>	60.0	37.5	159.8	10.4
<b>SE</b>	57.4	43.2	132.8	9.6
<b>UK</b>	53.6	30.7	175.0	14.4

(1) Rounded estimates based on non-confidential data.

(2) Excluding mining and quarrying of energy producing materials (NACE Subsection CA) and electricity, gas and water supply (NACE Section E).

(3) Excluding real estate activities (NACE Division 70) and research and development (NACE Division 73).

(4) 2003.

Source: Eurostat (SBS)

## 1.4: ENTERPRISE DEMOGRAPHY AND SIZE CLASS ANALYSIS

### BUSINESS DEMOGRAPHY

In the form of a new product/service (innovation), the entrepreneur disturbs market equilibrium. For this reason, entrepreneurship is often cited as a key driver of competitiveness, as it forces enterprises that already exist to improve their efficiency, while driving inefficient enterprises out of business. The European Commission encourages entrepreneurship as part of its revised Lisbon process, re-launched as the growth and jobs strategy (13). Access to markets, competition policy and employment creation are other important aspects in relation to entrepreneurship, although newly born enterprises in their initial start-up stage often actually have no paid employees, but operate with a working owner and/or unpaid family and friends.

SBS business demography statistics focus on so-called real enterprise births and deaths. Under the definitions employed, births do not include entries into the business enterprise population due to mergers, break-ups, splits or the restructuring of enterprises, nor do they include changes resulting from a change in the enterprise's principal (main) activity.

It is often quite difficult, statistically, to determine the exact date of cessation with respect to enterprise deaths. Therefore, the convention is to consider an enterprise as dead if it has not had any turnover and employment for at least two years; as such, information presented on enterprise deaths is often provisional in nature.

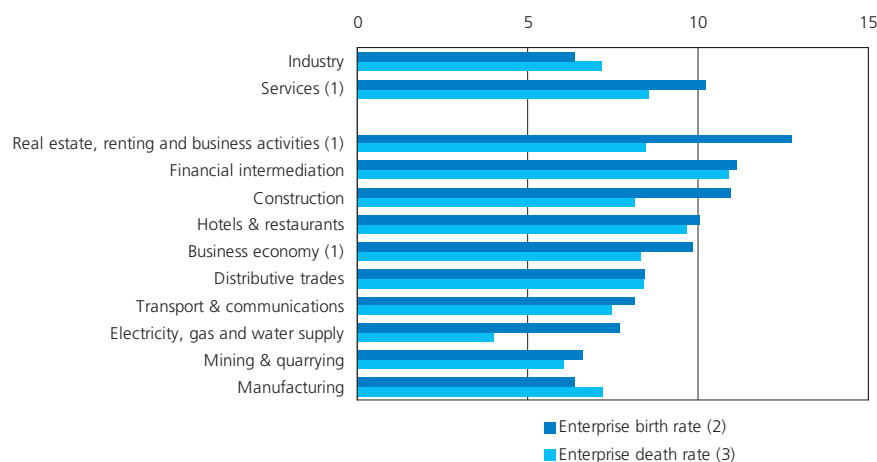
There were 1.3 million newly born enterprises in the business economy of 18 countries for which data are available for 2004 (14): to put this in perspective newly born enterprises accounted for 9.9 % of the total stock of enterprises, while the average death rate was 8.3 % (15).

(13) For more details see [http://ec.europa.eu/enterprise/entrepreneurship/index\\_en.htm](http://ec.europa.eu/enterprise/entrepreneurship/index_en.htm).

(14) Bulgaria, the Czech Republic, Estonia, Spain, Italy, Cyprus, Latvia, Lithuania (2003), Luxembourg, Hungary, the Netherlands, Portugal, Romania, Slovenia (2003), Slovakia, Finland, Sweden and the United Kingdom; data cover the business economy (NACE Sections C to K, excluding Class 74.15).

(15) The Czech Republic (2003), Estonia, Spain, Italy (2003), Latvia, Luxembourg (2003), Hungary (2003), the Netherlands (2003), Portugal (2003), Romania, Slovakia, Finland (2003), Sweden and the United Kingdom; provisional data.

**Figure 1.17**  
**Enterprise birth and death rates, average for available Member States, 2004**  
**(% share of active enterprises)**



(1) Excluding management activities of holding companies (NACE Class 74.15).

(2) Weighted average based on Bulgaria, Czech Republic, Estonia, Spain, Italy, Cyprus, Latvia, Lithuania (2003), Luxembourg, Hungary, Netherlands, Portugal, Romania, Slovenia (2003), Slovakia, Finland, Sweden and United Kingdom.

(3) Weighted average based on Czech Republic (2003), Estonia, Spain, Italy (2003), Latvia, Luxembourg (2003), Hungary (2003), Netherlands (2003), Portugal (2003), Romania, Slovakia, Finland (2003), Sweden and United Kingdom.

Source: Eurostat (SBS)

Economic theory suggests that relatively low numbers of enterprise births are likely to be recorded for those activities where higher barriers to entry exist, perhaps because a greater level of initial investment in production factors is required to reach a minimum efficient scale of production. Consequently, where barriers to entry (and exit) are lower, as is the case for many services and construction activities, there are generally higher levels of enterprise birth and deaths.

Figure 1.17 shows enterprise birth rates and preliminary death rates for 2004 across a range of NACE sections based on averages for those Member States for which data are available (see footnote 13 for details of the country coverage for birth rates and footnote 14 for details of the coverage for death rates). Real estate, renting and business activities (NACE Section K, excluding Class 74.15), financial intermediation (NACE Section J) and construction (NACE Section F) reported the highest enterprise birth rates (12.7 %, 11.2 % and 11.0 % respectively), with hotels and restaurants (NACE Section H) the only other sector (at the NACE section level of detail) to report a birth rate above the business economy average (9.9 %). All four of these sectors reported a positive difference between their birth and death rates, suggesting a net increase in the number of enterprises in these activities. However, the highest difference (3.7 percentage

points) between birth and death rates was recorded for electricity, gas and water supply (NACE Section E), where the provisional death rate was only 4.0 %. This relatively large difference might, among other reasons, be explained by a recent period of liberalisation measures within these activities in a number of countries, resulting in the creation of energy and water distribution companies that enter the market to compete with established, formerly monopoly suppliers. At the other end of the range, there were more deaths within the population of manufacturing (NACE Section D) enterprises than births (7.2 % compared with 6.4 %). It should however be noted that the difference between the two demographic rates of births and deaths is not the only factor that affects the number of enterprises within a particular sub-population, as the number of enterprises may also change as a function of mergers, take-overs, split-offs and break-ups.

Some 77.0 % of all enterprises born in the industrial economy (NACE Sections C to E) in 2002 survived to 2004 among the 16 countries for which data are available (16). Two-year survival rates were slightly lower for construction (75.3 %) and services (NACE Sections G to K, excluding Class 74.15, 75.2 %).

(16) The Czech Republic, Estonia, Spain, Italy, Latvia, Lithuania (2003), Luxembourg, Hungary, the Netherlands, Portugal, Romania, Slovenia (2003), Slovakia, Finland, Sweden and the United Kingdom.

Among 18 of the Member States for which data are available (see Table 1.11), countries with relatively low/high overall birth rates also tended to report relatively low/high death rates. Italy, the Netherlands, Portugal, Slovenia, Finland and Sweden were among those countries with the lowest levels of renewing their enterprise populations, while Estonia, Romania and the United Kingdom reported some of the highest rates (in particular for services).

### FACTORS OF BUSINESS SUCCESS

In a bid to encourage more entrepreneurs, a European Council meeting in 2006 agreed that all Member States should establish (by the end of 2007) one-stop shops for entrepreneurs to undertake all procedures involved in starting a new business (for example, tax and VAT, social security, as well as the actual creation of the company), while reducing the time needed to no more than a week. This was followed on 11 July 2007 by the European Parliament accepting a Commission proposal for removing unnecessary burdens on small businesses <sup>(17)</sup>.

Based on the business demography data collection exercise, a special SBS survey was launched with respect to factors of business success. The objective was to profile successful entrepreneurs by studying enterprises that were born in 2002 and had survived through to 2005, analysing differences in relation to gender, age-group, education and previous experience. Table 1.12 presents an overview of the results based on averages constructed from available information for a subset of Member States <sup>(18)</sup>; it is important to note that the information presented only describes the characteristics of the sub-population of successful entrepreneurs. As such, while 72.0 % of all surviving enterprises were in the hands of men, this statistic says nothing about whether a higher proportion of unsuccessful entrepreneurs were men or women.

The most popular motivation for starting an enterprise, among successful entrepreneurs, was a desire to be one's own boss, as selected by 75.0 % of respondents (multiple responses were allowed); this criterion was particularly important (80.8 %) within the construction sector. The next most important motivation was the prospect of making more money (72.6 %), while more than two thirds (67.8 %) of successful entrepreneurs also cited a desire for new challenges.

<sup>(17)</sup> See [http://ec.europa.eu/enterprise/newsroom/cf/itemsshortdetail.cfm?item\\_id=734](http://ec.europa.eu/enterprise/newsroom/cf/itemsshortdetail.cfm?item_id=734) for more details.

<sup>(18)</sup> Average based on data for Bulgaria, the Czech Republic, Denmark, Italy, Lithuania, Luxembourg, Austria, Romania, Slovakia and Sweden; data cover the business economy (NACE Sections C to K, excluding Class 74.15).

Table 1.11

### Enterprise birth and death rates, 2004, and two-year survival rates for enterprises born in 2002 (%) (1)

	Industry			Construction			Services (2)		
	Birth rate	2-year survival rate	Death rate	Birth rate	2-year survival rate	Death rate	Birth rate	2-year survival rate	Death rate
<b>BG</b>	8.1	:	:	9.8	:	:	10.9	:	:
<b>CZ</b>	7.9	69.9	10.7	10.3	66.9	11.0	10.5	63.4	13.3
<b>EE</b>	11.4	78.2	10.0	22.4	78.0	15.9	16.4	72.0	12.5
<b>ES</b>	6.0	79.7	5.2	12.1	73.2	6.4	9.7	75.9	6.3
<b>IT</b>	4.6	77.9	6.4	9.8	75.0	8.3	7.9	74.4	7.5
<b>CY</b>	2.6	:	:	11.1	:	:	5.4	:	:
<b>LV</b>	8.6	57.9	6.8	11.7	63.5	8.4	10.8	62.0	7.9
<b>LT (3)</b>	8.8	87.1	:	11.1	81.8	:	9.2	80.3	:
<b>LU</b>	6.4	72.9	5.4	8.4	81.4	7.4	10.8	81.7	9.1
<b>HU</b>	5.8	75.3	8.6	10.8	75.2	10.4	10.6	68.8	11.1
<b>NL</b>	5.9	75.8	6.7	8.0	76.4	6.8	9.2	70.7	9.5
<b>PT</b>	5.7	96.1	4.8	7.8	96.7	3.4	6.8	95.8	5.7
<b>RO</b>	15.2	78.4	7.9	24.2	78.5	6.9	19.2	76.5	8.4
<b>SI (3)</b>	3.8	87.4	:	6.7	89.5	:	7.4	83.1	:
<b>SK</b>	8.4	64.1	6.3	10.9	62.3	5.6	11.0	68.0	8.1
<b>FI</b>	5.0	70.8	5.8	9.5	72.6	6.6	8.7	66.9	7.5
<b>SE</b>	4.9	88.2	4.5	6.8	89.6	4.8	6.7	87.5	5.5
<b>UK</b>	8.6	83.0	10.4	13.4	83.2	10.2	15.2	81.7	11.9
<b>Avg. (4)</b>	6.4	77.0	7.2	11.0	75.3	8.1	10.2	75.2	8.6
<b>CH</b>	2.2	:	3.0	3.2	:	3.0	4.0	:	3.8

(1) Enterprise death rates are preliminary.

(2) Excluding management activities of holding companies (NACE Class 74.15).

(3) 2003 for birth and death rates; enterprises born in 2001 and surviving to 2003 for survival rate..

(4) Birth rates - weighted average based on Bulgaria, Czech Republic, Estonia, Spain, Italy, Cyprus, Latvia, Lithuania (2003), Luxembourg, Hungary, Netherlands, Portugal, Romania, Slovenia (2003), Slovakia, Finland, Sweden and United Kingdom; 2-year survival rates - weighted average based on Czech Republic, Estonia, Spain, Italy, Latvia, Lithuania (2003), Luxembourg, Hungary, Netherlands, Portugal, Romania, Slovenia (2003), Slovakia, Finland, Sweden and United Kingdom; death rates - weighted average based on Czech Republic (2003), Estonia, Spain, Italy (2003), Latvia, Luxembourg (2003), Hungary (2003), Netherlands (2003), Portugal (2003), Romania, Slovakia, Finland (2003), Sweden and United Kingdom.

Source: Eurostat (SBS)

Table 1.12

### Factors of business success among entrepreneurs who started an enterprise in 2002 which had survived to 2005, average for available Member States (1)

	Business economy (2)	Industry	Construction	Services (2)
<b>Start-up motivation:</b>				
<b>Desire to be one's own boss</b>	75.0	76.7	80.8	73.5
<b>Prospect of making more money</b>	72.6	72.2	74.0	72.4
<b>Desire for new challenges</b>	67.8	67.8	64.2	68.5
<b>Start-up financing:</b>				
<b>Own funds or savings</b>	85.4	85.1	90.5	84.3
<b>Financial assistance from family or friends</b>	26.5	30.9	17.2	27.8
<b>Bank loan with collateral</b>	11.2	12.9	12.1	10.8
<b>Start-up difficulties:</b>				
<b>Deal with legal / governmental / administrative matters</b>	63.2	68.4	64.8	62.0
<b>To establish contacts with customers</b>	61.1	63.3	64.5	60.0
<b>To get financing</b>	55.0	65.8	59.9	52.2
<b>Impediments to selling products or services:</b>				
<b>Competition too vigorous</b>	82.3	81.3	86.6	81.6
<b>Too little demand</b>	55.3	57.4	48.8	56.3
<b>Difficult pricing</b>	43.1	46.6	53.6	40.2
<b>Impediments to developing the business activity:</b>				
<b>Regulatory and administrative burden</b>	69.2	71.3	75.6	67.4
<b>Profitability</b>	67.1	69.2	66.5	66.9
<b>Non or late paying customers</b>	51.5	57.8	74.9	45.5

(1) Average based on data for Bulgaria, Czech Republic, Denmark, Italy, Lithuania, Luxembourg, Austria, Romania, Slovakia and Sweden; only the three most popular replies are shown; multiple answers permitted.

(2) Excluding management activities of holding companies (NACE Class 74.15).

Source: Eurostat (SBS)

The survey also provides information on difficulties faced when starting an enterprise. The most often cited start-up difficulties included dealing with legal/governmental/administrative matters (63.2 %), closely followed by establishing contacts with customers (61.1 %), and getting finance (55.0 %) – this latter category was a preoccupation for a considerably higher proportion of successful, industrial entrepreneurs (65.8 %) where start-up costs are often higher than within construction or service sectors. Regulatory and administrative burdens were also the most often cited impediment to developing a business activity (69.2 %), followed by profitability (67.1 %), and problems of non or late paying customers (51.5 %) – the importance of this final burden was particularly high among successful entrepreneurs within the construction sector, as cited by 74.9 %.

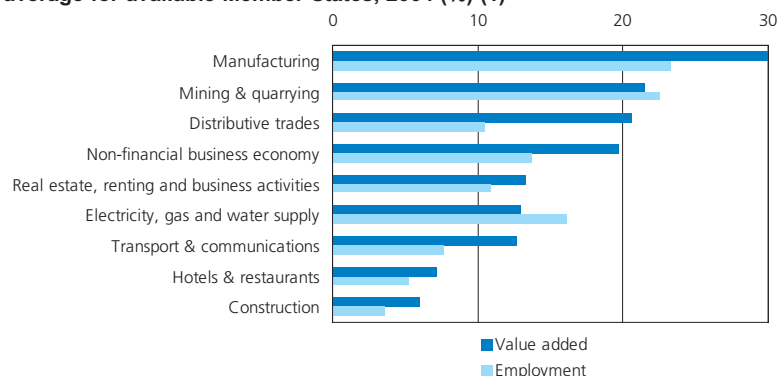
### INTER-ENTERPRISE RELATIONS

The challenges of globalisation and increased competition, coupled with the possibilities offered by information and communications technologies, has led many enterprises to reassess how they do business. One of the main changes in the behaviour of enterprises in recent years has been an increase in the establishment of long-term relations with other enterprises, through outsourcing or networking, in relation to both core activities and supportive functions. This process may well have been stimulated by the possibilities and advantages offered by ICT developments.

Inter-enterprise relations are defined as relations between enterprises, excluding legal ownership and relations arising from the normal purchase or sale of goods and services for immediate consumption. They cover outsourcing, franchising, networking, licensing, joint ventures, as well as non-permanent co-operation, but exclude relations between holding companies and their subsidiaries. An ad hoc survey on these types of relationships was carried out in 2003 in six Member States (Denmark, Germany, France, Portugal, Finland and Sweden) across the activities of manufacturing (NACE Sections D), construction (NACE Section F) and non-financial services (NACE Sections G to I and K).

Figure 1.18

Share of value added and employment generated by foreign-controlled enterprises, average for available Member States, 2004 (%) (1)



(1) Weighted average based on data available for Bulgaria, the Czech Republic, Estonia, Spain, Cyprus, Latvia, Lithuania, Hungary, Austria (2003), Portugal, Romania and Slovakia.  
Source: Eurostat (SBS)

In five Member States that took part in the survey (excluding France), between 60 % and 70 % of enterprises answered favourably when questioned about the perceived impact of relations with other enterprises on their own competitiveness during the previous three year period. A higher proportion of large enterprises were found to engage in long-term relations with other enterprises, a feature that was particularly pronounced in Denmark and Portugal. The propensity of enterprises to engage in long-term relations also varied between economic activities, as witnessed by half of all German fuel processing (NACE Subsection DF) enterprises being engaged in long-term relations; this particularly high proportion probably reflects the need for strategic partnerships in this activity in order to secure energy supplies.

Of the seven different types of long-term relation that were surveyed, outsourcing was the most prevalent, while networking was generally the next most important type of relation (in particular in the Scandinavian countries), while other types were usually of minor importance, except for joint ventures in France and licensing in Germany.

Some of the most commonly cited reasons for engaging in relations with other enterprises included increased flexibility, resources or expertise, and cost reduction or economies of scale. Increased flexibility was cited as either very or somewhat important by an average of 70 % of respondents, suggesting that enterprises sought relations to protect themselves from rapidly changing markets, through product diversification, supply chain management, vertical integration, or more cost-effective locations for plant and distribution networks.

### FOREIGN-CONTROLLED ENTERPRISES (INWARD FATS)

Globalisation has had a considerable impact on the location of production. Many enterprises have extended their operations beyond national borders in an attempt to (amongst other things) increase proximity to customers, circumvent trade barriers, reduce costs (labour, transportation or material inputs), guarantee the supply of material inputs or avoid regulation. Groups of (predominantly large) enterprises are at the core of the globalisation process and may be seen as agents of cross-border transactions, as they control decisions, information flows and strategies across a range of countries. The qualitative nature of information required to define a group's perimeter can often make it difficult to obtain reliable statistical information on these economic actors. One of the main constraints when trying to measure their activities is that global enterprises make their decisions against a worldwide backdrop, while their decisions continue to be analysed using national data collections.

Aside from exports or enterprise creation, there are a number of alternatives for an enterprise wishing to diversify into new markets, among which is to control an enterprise in another country. Information on foreign-controlled enterprises is covered by inward foreign affiliates statistics (inward FATS). For the purpose of the inward FATS data collection, the concept of control is defined as the ability to determine general corporate policy; however in practice, a share of ownership is often used as a proxy.

These inward FATS statistics show that the number of foreign affiliates tends to be generally low. However, given their relatively large average size, these enterprises can often exercise a significant economic impact. Figure 1.18 shows that foreign-controlled enterprises generated 30 % of the manufacturing sector's (NACE Section D) total value added in 2004 in the ten Member States for which data are available <sup>(19)</sup>. In contrast less than 8 % of the value added within the construction (NACE Section F) and the hotels and restaurants (NACE Section H) sector was created by foreign-controlled enterprises.

More detailed country information is provided in Table 1.13, supporting the view that foreign-controlled enterprises had a relatively large average size and higher levels of apparent labour productivity when compared with nationally-controlled enterprises. Across those countries for which data are available, the share of foreign-controlled enterprises in the total enterprise population was (with the exception of Estonia) always below 6 %, and more generally less than 2 %. Nevertheless, foreign-controlled enterprises contributed a double-digit share of the non-financial business economy workforce in each country (except Portugal and Cyprus), with almost a third of the workforce in Estonia working for a foreign-controlled enterprise. The labour productivity of foreign-controlled enterprises was relatively high, as in Hungary, Bulgaria, Lithuania and Portugal, the share of foreign-controlled enterprises in value added was at least twice as high as the corresponding share of foreign-controlled enterprises in the number of persons employed; while in the remaining countries for which data are available foreign-controlled enterprises accounted for a higher proportion of total value added than their share of total employment. Note that the difference in productivity levels may at least in part be due to the larger, average size of foreign-controlled enterprises (as productivity generally increase by enterprise size, see next section), rather than any inherent difference in productivity levels between nationally-controlled and foreign-controlled enterprises.

<sup>(19)</sup> Bulgaria, the Czech Republic, Estonia, Spain, Latvia, Lithuania, Hungary, Austria (2003), Portugal and Slovakia.

**Table 1.13**  
**Impact of foreign-controlled enterprises, non-financial business economy, 2004**  
**(% share of total)**

	Number of enterprises	Value added	Number of persons employed
<b>BG</b>	2.3	31.1	13.5
<b>CZ</b>	1.7	35.1	20.8
<b>EE</b>	19.6	41.2	31.6
<b>ES</b>	0.2	15.3	10.1
<b>CY</b>	0.7	4.2	3.1
<b>LV</b>	4.1	26.1	13.8
<b>LT</b>	3.4	25.1	11.0
<b>HU</b>	0.3	40.3	16.5
<b>AT (1)</b>	1.1	16.4	11.8
<b>PT</b>	0.3	15.6	7.5
<b>RO</b>	0.9	34.7	17.6
<b>SK</b>	5.7	44.8	26.6

(1) 2003.

Source: Eurostat (SBS)

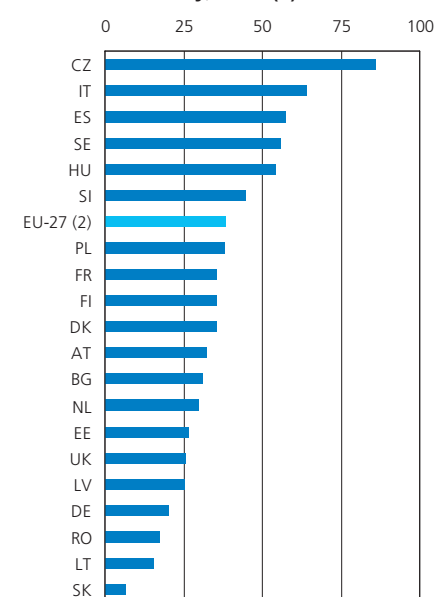
#### SIZE CLASS ANALYSIS: THE ROLE OF SMALL AND MEDIUM-SIZED ENTERPRISES (SMES)

The European Commission has placed SMEs at the centre of industrial policy-making <sup>(20)</sup>, realising that 'if SMEs are to have a significant impact on Europe's economy, they need to grow bigger – take on more employees, and expand their product ranges, markets and turnover'. Innovation is often seen as the most important driver of growth, whether it leads to new products and services or more efficient ways of delivering existing ones (through the introduction of new technology, know-how, additional staff with new skills, or access to new markets).

Commission Recommendation 2003/361/EC regarding the definition of SMEs has been in effect since 1 January 2005. It applies to all Community policies in favour of SMEs and covers the whole of the European Economic Area. It was revised to ensure that enterprises which were part of larger groups could no longer benefit from SME support schemes, and that help was targeted specifically at genuine SMEs. Under the recommendation, enterprises are classified as SMEs when they have fewer than 250 employees and remain independent of larger companies. Furthermore, their annual turnover should not exceed EUR 50 million, or their annual balance sheet total should not exceed EUR 43 million. This definition is critical in establishing which SMEs may benefit from EU programmes, policies and competition rules.

<sup>(20)</sup> More details can be found on the web-site for the Directorate-General for Enterprise and Industry, available at [http://ec.europa.eu/enterprise/entrepreneurship/index\\_en.htm](http://ec.europa.eu/enterprise/entrepreneurship/index_en.htm).

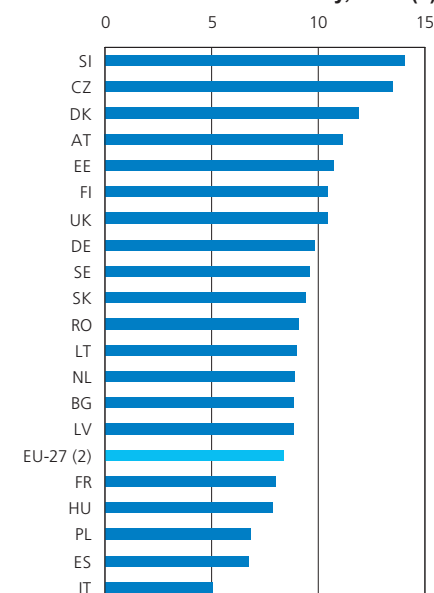
**Figure 1.19**  
**Density of SMEs: number of SMEs per 1 000 inhabitants, non-financial business economy, 2004 (1)**



(1) Belgium, Ireland, Greece, Cyprus, Luxembourg, Malta and Portugal, not available.

(2) Rounded estimate based on non-confidential data. Source: Eurostat (SBS, DEMO)

**Figure 1.20**  
**Density of large enterprises: number of large enterprises per 100 000 inhabitants, non-financial business economy, 2004 (1)**



(1) Belgium, Ireland, Greece, Cyprus, Luxembourg, Malta and Portugal, not available.

(2) Rounded estimate based on non-confidential data. Source: Eurostat (SBS, DEMO)



Table 1.14

## Breakdown of activity within the non-financial business economy by size-class, EU-27, 2004 (% share of total) (1)

Chapter	No. of enterprises					Value added					No. of persons employed				
	SMEs	Micro	Small	Med.	Large	SMEs	Micro	Small	Med.	Large	SMEs	Micro	Small	Med.	Large
<b>1 Non-financial business economy</b>	99.8	91.8	7.0	1.1	0.2	57.0	20.2	18.8	17.9	43.0	67.1	29.6	21.0	16.9	33.1
<b>Industry</b>	99.0	79.5	15.7	3.8	0.9	41.8	7.0	14.2	21.2	59.8	56.7	13.0	19.6	24.1	44.5
<b>2 Food, beverages &amp; tobacco</b>	99.0	77.7	17.5	3.7	0.9	44.1	7.7	14.7	21.7	55.9	62.0	15.9	21.3	24.8	38.0
<b>3 Textiles, clothing, leather &amp; footwear</b>	99.2	78.9	15.8	3.8	1.5	74.6	13.8	28.5	31.3	26.9	72.7	16.8	27.3	30.3	27.3
<b>4 Wood &amp; paper</b>	99.5	82.9	12.0	2.4	0.5	57.0	11.0	19.8	25.9	43.0	72.8	21.4	25.2	25.2	27.2
<b>5 Chemicals, rubber &amp; plastics</b>	95.7	61.0	25.0	9.5	2.5	33.6	2.5	9.4	21.8	64.8	47.9	5.5	14.9	27.5	52.3
<b>6 Other non-metallic mineral products</b>	99.0	78.7	16.2	4.1	1.0	52.0	6.9	18.4	26.8	48.0	62.5	14.2	21.3	27.1	37.8
<b>7 Metals &amp; metal products</b>	99.3	78.8	17.2	3.3	0.5	61.6	11.4	24.3	26.0	38.4	71.2	17.6	27.8	25.9	28.8
<b>8 Machinery &amp; equipment</b>	98.8	72.9	19.8	6.1	1.3	50.5	6.2	16.7	27.6	49.5	56.2	9.1	19.0	28.1	43.8
<b>9 Electrical machinery &amp; optical equipment</b>	98.8	81.0	14.1	3.7	1.1	36.0	5.8	11.6	18.7	64.0	47.2	10.5	15.6	21.6	53.8
<b>10 Transport equipment</b>	96.0	69.6	18.6	7.9	3.8	12.7	:	3.9	8.9	87.3	19.7	2.5	5.6	11.9	78.1
<b>11 Furniture &amp; other manufacturing</b>	99.6	86.7	10.9	2.0	0.4	72.5	17.9	26.1	28.0	27.5	73.7	24.7	26.3	24.8	24.1
<b>12 Non-energy mining &amp; quarrying</b>	99.4	70.5	24.6	4.2	0.6	65.2	10.0	30.8	24.3	34.8	66.4	12.8	29.3	24.3	33.6
<b>13 Energy</b>	95.2	:	13.3	:	4.6	20.4	:	:	:	80.2	13.5	1.5	3.3	8.8	85.0
<b>14 Recycling &amp; water supply</b>	98.7	77.8	15.7	5.2	1.4	46.2	9.2	16.2	21.0	54.2	48.0	8.9	15.5	24.9	50.0
<b>15 Construction</b>	99.9	91.9	7.8	0.8	0.1	82.5	33.1	31.9	17.6	17.5	88.2	42.6	30.4	15.4	11.8
<b>Non-financial services</b>	99.9	93.7	5.4	0.7	0.1	62.7	26.9	19.9	16.0	37.4	68.3	35.6	19.3	13.4	31.7
<b>16 Motor trades</b>	99.9	91.1	8.0	0.9	0.1	79.7	27.9	29.9	21.9	20.4	88.5	44.3	28.5	16.0	11.6
<b>17 Wholesale trade</b>	99.9	90.3	8.4	1.2	0.1	77.2	23.8	30.3	23.8	22.8	83.7	33.5	28.8	19.6	17.8
<b>18 Retail trade &amp; repair</b>	99.9	95.9	3.7	0.3	0.1	57.3	32.8	16.0	8.3	42.7	65.3	43.7	14.5	7.1	34.7
<b>19 Hotels &amp; restaurants</b>	99.9	91.2	8.1	0.6	0.1	75.8	36.5	26.2	13.5	24.2	82.3	45.4	26.3	10.5	17.7
<b>20 Transport services</b>	97.3	91.2	7.1	1.2	0.2	50.8	16.6	18.2	16.0	50.0	58.1	24.2	18.6	15.6	41.9
<b>21 Communications &amp; media</b>	99.5	85.5	10.4	2.1	0.5	22.1	5.1	7.6	9.3	78.0	34.3	10.9	12.2	11.8	65.6
<b>22 Business services</b>	99.7	94.7	4.4	0.8	0.2	66.4	28.4	20.0	17.9	33.6	64.9	31.2	16.9	16.8	35.1
<b>23 Real estate, renting &amp; R&amp;D</b>	99.9	96.5	2.9	0.5	0.1	83.1	47.7	17.1	18.5	16.8	80.0	47.4	17.1	15.7	18.6

(1) Rounded estimates based on non-confidential data; note that estimates may result in the sum of the size classes not being equal to 100 %.

Source: Eurostat (SBS)

However, for reasons of feasibility, the collection of structural business statistics on SMEs only uses the criteria based on employment. As such, for the purpose of the statistics presented hereafter, SMEs are defined as having fewer than 250 persons employed; and subsequently large enterprises are defined as employing 250 or more persons. The sub-population of SMEs (1 to 249 persons employed) may be further divided into:

- micro enterprises (with 1 to 9 persons employed);
- small enterprises (with 10 to 49 persons employed), and;
- medium-sized enterprises (with 50 to 249 persons employed).

According to SBS, there are considerable differences between Member States in the number of enterprises that make-up the non-financial business economy. On average there were 38.6 SMEs (with less than 250 persons employed) in the EU-27's non-financial business economy for each 1 000 inhabitants in 2004. This ratio more than doubled in the Czech Republic to 86 SMEs per 1 000 inhabitants,

while at the other end of the range there were just 6.5 SMEs per 1 000 inhabitants in neighbouring Slovakia (see Figure 1.19).

There was an average of 8.4 large enterprises (with 250 or more persons employed) in the EU-27's non-financial business economy per 100 000 inhabitants (for comparison with the SME figures this is 0.08 large enterprises per 1 000 inhabitants) in 2004. A relatively high ratio of large enterprises to inhabitants was recorded in Slovenia and in the Czech Republic, while only France, Hungary, Poland, Spain and Italy reported ratios below the EU average (see Figure 1.20).

In total, there were almost 19 million enterprises in the EU-27's non-financial business economy in 2004. Of these, 99.8 % were SMEs, the majority of which were micro enterprises (employing fewer than 10 persons). However, on average large enterprises in the EU-27's non-financial business economy in 2004 employed just over 1 000 persons, compared with an average 4.4 persons employed by SMEs. As such, the relative weight of a single large enterprise in employment terms was, on average, equivalent to that of 227 SMEs.

Just over two thirds (67.1 %) of the EU-27's non-financial business economy workforce was employed within SMEs in 2004. Enterprise structures vary considerably between activities – see Table 1.14 – with, for example, large enterprises accounting for 85.0 % of those employed in the energy sector, 78.1 % of those employed in the transport equipment manufacturing sector, or 65.6 % of those employed in the communications and media sector. In contrast, SMEs employed 88.5 % of motor trades workforce, or 88.2 % of those employed in the construction sector. The relative importance of SMEs in terms of their contribution to labour markets also varies considerably across countries, as SMEs employed 81.2 % of the non-financial business economy workforce in Italy in 2004, a share that fell close to 50 % in Slovakia and the United Kingdom (see Table 1.15).

Table 1.15

## Breakdown of the non-financial business economy by size-class, 2004 (% share of total)

	No. of enterprises					Value added					No. of persons employed				
	SMEs	Micro	Small	Med.	Large	SMEs	Micro	Small	Med.	Large	SMEs	Micro	Small	Med.	Large
<b>EU-27 (1)</b>	99.8	91.8	7.0	1.1	0.2	57.0	20.2	18.8	17.9	43.0	67.1	29.6	21.0	16.9	33.1
<b>BE</b>	:	:	:	0.9	:	:	:	:	18.9	:	:	:	:	15.5	:
<b>BG</b>	99.7	90.2	8.0	1.6	0.3	49.5	14.3	15.8	19.3	50.5	71.7	29.3	21.3	21.0	28.3
<b>CZ</b>	99.8	95.3	3.8	0.8	0.2	56.7	19.8	16.7	20.2	43.3	68.9	31.8	18.4	18.7	31.1
<b>DK</b>	99.7	86.9	10.9	1.9	0.3	:	:	:	20.9	:	:	:	:	21.1	:
<b>DE</b>	99.5	82.8	14.4	2.3	0.5	:	:	17.7	:	:	60.1	19.2	21.9	19.0	39.9
<b>EE</b>	99.6	81.5	15.1	3.0	0.4	:	:	23.7	:	:	:	:	27.7	:	:
<b>IE</b>	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>EL</b>	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>ES</b>	99.9	92.3	6.8	0.8	0.1	68.1	27.3	23.6	17.2	31.9	79.1	38.9	25.5	14.7	20.9
<b>FR</b>	99.8	92.3	6.4	1.0	0.2	53.7	19.4	18.3	16.0	46.3	60.9	23.6	20.6	16.7	39.1
<b>IT</b>	99.9	94.6	4.8	0.5	0.1	70.3	30.8	23.3	16.3	29.7	81.2	46.9	21.9	12.4	18.8
<b>CY</b>	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>LV</b>	99.7	83.1	13.9	2.7	0.3	:	:	:	:	:	75.0	22.6	26.2	26.3	25.0
<b>LT</b>	99.4	75.5	19.7	4.3	0.6	56.7	9.3	21.7	25.7	43.3	71.3	17.0	26.4	27.9	28.7
<b>LU</b>	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>HU</b>	99.9	:	:	:	0.1	51.9	:	:	:	48.1	72.2	:	:	:	27.8
<b>MT</b>	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
<b>NL</b>	99.7	89.0	9.1	1.6	0.3	60.4	:	:	21.3	39.6	67.4	29.2	20.9	17.3	32.6
<b>AT</b>	99.7	86.9	11.1	1.7	0.3	:	:	20.5	:	:	:	:	23.4	:	:
<b>PL</b>	99.8	96.2	2.7	0.9	0.2	47.8	16.5	10.7	20.6	52.2	70.3	40.1	11.7	18.5	29.7
<b>PT (2)</b>	:	:	6.6	:	:	:	:	21.0	:	:	:	:	23.6	:	:
<b>RO</b>	99.5	88.1	9.0	2.3	0.5	44.5	12.3	13.1	19.1	55.5	58.2	18.5	17.2	22.5	41.8
<b>SI</b>	99.7	92.9	5.5	1.3	0.3	:	:	:	21.6	:	:	:	:	:	:
<b>SK</b>	98.6	:	:	5.5	1.4	42.4	:	:	17.3	57.6	51.2	:	:	22.5	48.8
<b>FI</b>	99.7	92.4	6.1	1.2	0.3	:	:	:	:	:	:	:	:	:	:
<b>SE</b>	99.8	94.7	4.3	0.8	0.2	56.5	21.1	17.5	17.9	43.5	64.2	26.3	20.3	17.7	35.8
<b>UK</b>	99.6	86.4	11.4	1.8	0.4	50.7	17.8	16.1	16.8	49.3	53.9	21.1	18.0	14.8	46.1

(1) Rounded estimates based on non-confidential data.

(2) 2003.

Source: Eurostat (SBS)

Table 1.16

## Apparent labour productivity by size-class, EU-27, 2004 (EUR thousand per person employed)

Chapter	SMEs	Micro	Small	Med.	Large
<b>1 Non-financial business economy</b>	34.9	28.1	36.9	43.4	53.4
<b>Industry (1)</b>	36.7	26.0	35.7	43.0	64.2
<b>2 Food, beverages &amp; tobacco</b>	29.7	20.3	28.8	36.6	61.6
<b>3 Textiles, clothing, leather &amp; footwear (1)</b>	20.0	16.7	22.0	21.0	20.0
<b>4 Wood &amp; paper (1)</b>	29.0	19.0	29.5	38.0	60.0
<b>5 Chemicals, rubber &amp; plastics (1)</b>	47.5	30.3	42.7	53.6	83.7
<b>6 Other non-metallic mineral products</b>	37.9	22.0	39.4	45.0	57.8
<b>7 Metals &amp; metal products</b>	36.8	27.6	37.2	42.8	56.8
<b>8 Machinery &amp; equipment</b>	42.1	31.7	41.2	46.2	53.0
<b>9 Electrical machinery &amp; optical equipment</b>	40.2	29.0	39.3	45.6	62.7
<b>10 Transport equipment</b>	35.6	-0.4	37.9	41.0	61.7
<b>11 Furniture &amp; other manufacturing</b>	26.4	19.4	26.6	30.3	30.5
<b>12 Non-energy mining &amp; quarrying</b>	49.9	39.9	53.5	50.9	52.8
<b>13 Energy (1)</b>	181.5	:	:	150.0	113.2
<b>14 Recycling &amp; water supply (1)</b>	49.0	53.0	54.2	43.8	57.0
<b>15 Construction</b>	30.8	25.6	34.6	37.6	48.6
<b>Non-financial services</b>	35.0	28.9	39.3	45.5	45.0
<b>16 Motor trades</b>	33.3	23.3	38.8	50.8	65.3
<b>17 Wholesale trade</b>	44.7	34.4	50.9	58.8	62.0
<b>18 Retail trade &amp; repair</b>	19.9	17.1	25.0	26.7	27.9
<b>19 Hotels &amp; restaurants</b>	17.4	15.1	18.8	24.2	25.7
<b>20 Transport services (1)</b>	36.4	28.7	41.1	43.0	50.0
<b>21 Communications &amp; media (1)</b>	44.5	32.5	46.0	54.3	82.6
<b>22 Business services (1)</b>	39.0	35.0	45.2	40.6	36.4
<b>23 Real estate, renting &amp; R&amp;D (1)</b>	90.0	87.1	86.0	100.0	80.0

(1) Rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

The economic importance of SMEs was lower in terms of their contribution to total value added, as they generated 57.0 % of the EU-27's non-financial business economy value added in 2004. When combined with information on employment shares this suggests that the apparent labour productivity of SMEs was generally lower than that of larger enterprises. This view is supported by economic theory that suggests economies of scale may lead to larger enterprises generating more value added per person employed. This was the case for most of the activity aggregates used for the sectoral chapters covered in Table 1.16. Indeed, the manufacture of textiles, clothing, leather and footwear; energy; business services; and real estate, renting and R&D were the only four exceptions where apparent labour productivity was similar or higher among SMEs than large enterprises.

On average, apparent labour productivity in large enterprises was 53.2 % higher than in SMEs across the whole of the EU-27's non-financial business economy. These differentials in the apparent labour productivity ratios between SMEs and large enterprises were generally more marked for industrial activities, where persons employed in large enterprises were on average 74.9 % more productive than SMEs, while among non-financial services the same differential was reduced to 28.6 %. Apparent labour productivity differentials were particularly marked when the apparent labour productivity ratio of large enterprises was compared with that of micro enterprises within the food, beverages and tobacco, and wood and paper manufacturing sectors, as large enterprises reported ratios that were at least three times as high as those recorded for micro enterprises.

Despite considerable differences in the levels of labour productivity between Member States, there was a general pattern of labour productivity rising as a function of average enterprise size. This pattern was particularly apparent for industrial activities in the majority of countries. Exceptions to this rule included Bulgaria and Romania where the biggest difference in productivity ratios between large enterprises and SMEs was reported for non-financial services, and in the Czech Republic, Italy, Latvia and Hungary where construction activities reported the biggest differences.

**Table 1.17** Apparent labour productivity by size-class, 2004 (EUR thousand per person employed)

	Industry (1)		Construction (2)		Non-financial services	
	SMEs	Large	SMEs	Large	SMEs	Large
<b>EU-27 (3)</b>	36.7	64.2	30.8	48.6	35.0	45.0
<b>BE</b>	:	:	38.5	61.2	49.7	56.3
<b>BG</b>	3.3	8.2	3.4	4.4	3.2	9.2
<b>CZ</b>	12.3	22.8	9.1	19.9	12.8	16.4
<b>DK</b>	:	:	44.2	55.8	59.2	57.7
<b>DE</b>	45.0	71.0	33.8	48.6	45.5	49.9
<b>EE</b>	:	:	10.0	19.0	14.4	15.2
<b>IE</b>	:	:	107.2	117.7	52.4	59.7
<b>EL</b>	:	:	20.1	67.3	:	:
<b>ES</b>	36.9	83.8	28.2	58.7	29.7	42.0
<b>FR</b>	43.0	72.2	37.6	46.9	46.5	52.6
<b>IT</b>	39.5	74.3	29.4	59.1	31.1	51.4
<b>CY</b>	:	:	28.0	34.2	:	:
<b>LV</b>	7.1	11.3	6.7	10.8	:	:
<b>LT</b>	6.3	14.8	6.4	9.7	7.5	11.9
<b>LU</b>	:	:	39.6	43.2	:	:
<b>HU</b>	10.4	25.7	7.1	27.5	10.2	18.4
<b>MT</b>	:	:	:	:	:	:
<b>NL</b>	58.1	120.9	45.6	61.9	42.4	46.1
<b>AT</b>	:	:	43.5	59.3	44.9	47.6
<b>PL</b>	10.7	29.8	8.3	16.3	9.1	17.8
<b>PT</b>	:	:	13.6	37.2	18.7	33.2
<b>RO</b>	3.5	7.0	4.2	1.3	4.5	9.5
<b>SI</b>	:	:	23.1	22.5	22.5	27.8
<b>SK</b>	9.3	16.3	9.1	10.9	13.9	12.8
<b>FI</b>	:	:	46.5	47.3	53.9	46.6
<b>SE</b>	50.7	87.2	41.1	49.5	52.0	56.4
<b>UK</b>	55.7	96.0	57.2	73.1	47.9	46.3

(1) Germany, Latvia, Hungary and Slovakia, 2003.

(2) Luxembourg, 2003

(3) Rounded estimates based on non-confidential data.

Source: Eurostat (SBS)

## 1.5: LABOUR FORCE CHARACTERISTICS

The European Union has developed its employment strategy over a number of years following the Luxembourg jobs summit in 1997. Realignments of this strategy to fit with the Lisbon objectives and the Stockholm Council meeting of 2001 have resulted in a more significant use of labour force statistics to study not only changes in the absolute numbers of people in work or unemployed, but also a wide range of labour force characteristics, such as age, gender, working time, educational and skills profiles, as well as activity and employment rates. The information that is presented within this section is largely derived from the Labour Force Survey (LFS) which collects information from individual households (rather than from enterprises) – note that the data pertain to the second quarter of each reference year and not to annual averages.

According to SBS data, across the EU-27's non-financial business economy the average share of paid employees in the total number of persons employed was 86.2 % in 2004. This ratio was generally highest within industrial activities (94.5 % for industry), falling to 83.0 % for non-financial services and 81.0 % for construction where a higher proportion of working proprietors and unpaid family workers contributed to the workforce. As has been mentioned, SBS employment data refer to headcounts and as such make no distinction between full-time and part-time, or in the number of hours worked. However, data from the LFS shed some light on these differences – as while the majority of the workforce tends to work a regular five day week, from Monday to Friday, there are some activities within the non-financial business economy that lend themselves to different working time profiles.

Across the whole of the business economy (NACE Sections C to K), an average of 14.4 % of the EU-27's labour force worked on a part-time basis. This ratio rose to as high as 29.0 % of those employed within the retail trade and repair sector in 2006 (see Table 1.18), while the corresponding ratio for hotels and restaurants was 28.2 %. In contrast, there was very little part-time work within traditional, industrial activities, and in particular non-energy mining and quarrying (2.9 % of the workforce) or the energy sector (3.9 %).

The EU-27's labour force is also characterised by considerable differences in terms of its gender profile. Across the whole of the business economy, almost two thirds (64.2 %) of those employed in the EU-27 in 2006 were male. This imbalance tended to be repeated for most activities, with men outnumbering women by

**Table 1.18**  
**Employment characteristics, EU-27, 2006 (% share of total number of persons employed)**

Chapter	Share of employees in persons employed, 2004	Gender		Time at work		Age		
		Male	Female	Full-time	Part-time	15-29	30-49	50+
<b>Business economy</b>	:	64.2	35.8	85.6	14.4	24.1	54.3	21.6
<b>1 Non-financial business economy</b>	86.2	65.0	35.0	85.6	14.4	24.2	54.2	21.6
<b>Industry</b>	94.5	70.1	29.9	92.4	7.6	20.9	56.6	22.4
<b>2 Food, beverages &amp; tobacco</b>	93.9	59.2	40.8	88.6	11.4	24.1	56.0	19.9
<b>3 Textiles, clothing, leather &amp; footwear</b>	92.1	30.9	69.1	91.8	8.2	19.8	59.3	20.9
<b>4 Wood &amp; paper</b>	90.0	79.0	21.0	93.5	6.5	21.3	57.2	21.5
<b>5 Chemicals, rubber &amp; plastics</b>	97.8	67.5	32.5	93.4	6.6	20.1	58.2	21.7
<b>6 Other non-metallic mineral products</b>	94.3	76.4	23.6	94.7	5.3	19.1	58.6	22.3
<b>7 Metals &amp; metal products</b>	92.5	84.4	15.6	94.8	5.2	21.0	54.5	24.4
<b>8 Machinery &amp; equipment</b>	95.7	81.5	18.5	94.6	5.4	19.4	55.7	24.9
<b>9 Electrical machinery &amp; optical equipment</b>	95.4	66.8	33.2	93.2	6.8	22.8	56.9	20.3
<b>10 Transport equipment</b>	98.9	82.1	17.9	94.6	5.4	21.2	56.7	22.1
<b>11 Furniture &amp; other manufacturing</b>	88.7	71.4	28.6	90.1	9.9	22.9	56.8	20.3
<b>12 Non-energy mining &amp; quarrying</b>	96.0	89.4	10.6	97.1	2.9	16.8	56.0	27.2
<b>13 Energy</b>	:	80.0	20.0	96.1	3.9	14.3	58.6	27.2
<b>14 Recycling &amp; water supply</b>	97.5	79.0	21.0	93.7	6.3	14.9	58.1	27.1
<b>15 Construction</b>	81.0	91.9	8.1	94.1	5.9	24.6	53.8	21.6
<b>Non-financial services</b>	83.0	55.7	44.3	79.6	20.4	26.0	52.9	21.1
<b>16 Motor trades</b>	81.7	82.0	18.0	90.4	9.6	29.4	50.3	20.4
<b>17 Wholesale trade</b>	85.9	66.2	33.8	89.3	10.7	22.6	56.7	20.8
<b>18 Retail trade &amp; repair</b>	78.5	38.3	61.7	71.0	29.0	30.4	49.5	20.1
<b>19 Hotels &amp; restaurants</b>	80.6	44.3	55.7	71.8	28.2	35.8	47.3	17.0
<b>20 Transport services</b>	88.0	79.2	20.8	90.7	9.3	17.6	57.3	25.1
<b>21 Communications &amp; media</b>	95.4	59.9	40.1	82.3	17.7	21.9	56.0	22.1
<b>22 Business services</b>	84.0	55.4	44.6	78.7	21.3	23.6	55.5	20.8
<b>23 Real estate, renting &amp; R&amp;D</b>	74.3	54.4	45.6	81.1	18.9	19.6	50.6	29.8
<b>24 Financial services</b>	:	48.1	51.9	85.9	14.1	21.7	57.1	21.2

Source: Eurostat (SBS, LFS)

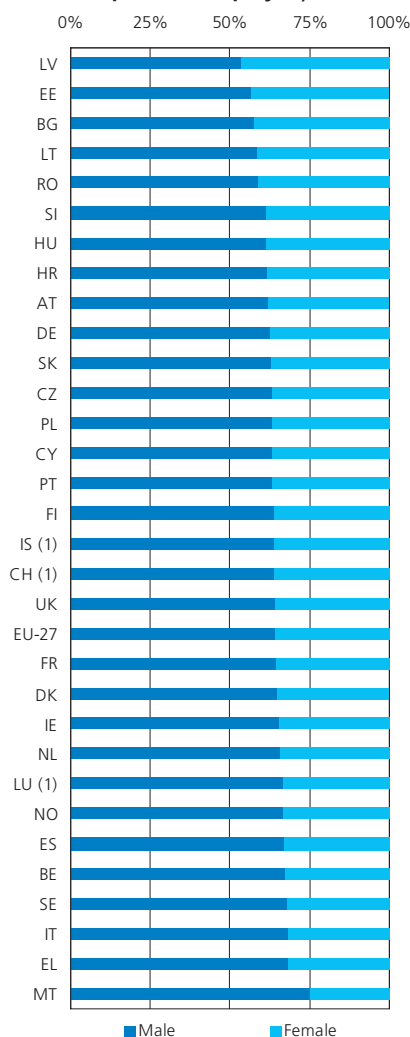
approximately nine to one within non-energy mining and quarrying and construction activities. There are some activities, however, such as textiles, clothing, leather and footwear manufacturing; retail trade and repair; hotels and restaurants; and financial services, where the majority of the EU-27 workforce were women in 2006.

The age profile of the EU-27 workforce also varies between the different sectors of the business economy, in part reflecting education/skills levels and experience requirements. The hotels and restaurants sector reported a relatively large proportion (35.8 %) of young workers, as defined by those aged between 15 and 29 years old, while much lower proportions of young persons were employed within the energy and the recycling and water supply sectors (less than 15 %).

Differences in the labour characteristics of the workforce across the Member States can often be explained by structural factors, insofar as they are repeated across most activities. As such, the proportion of females working within the business economy was generally high in the Baltic Member States, Bulgaria and Romania, where women accounted for more than four out of ten persons employed in 2006. In contrast, the proportion of women within the workforce was generally low in most Mediterranean Member States, in particular in Spain, Italy, and Malta (where the lowest rate was recorded, 24.8 %) – see Figure 1.21. The proportion of women in the workforce probably reflects, to some degree, socio-economic policies regarding family allowances, the availability of crèches and after school care, the propensity to employ on a part-time basis, and cultural differences with respect to interdependence/independence of (extended) family units. It should be noted, though, that traditionally women account for a relatively large part of the workforce of the ‘public sector’ in many countries, activities outside of the business economy as presented here. That probably explains to a large degree the low figures reported for Sweden for example, where public administration, health and education account for a relatively large part of the total economy.

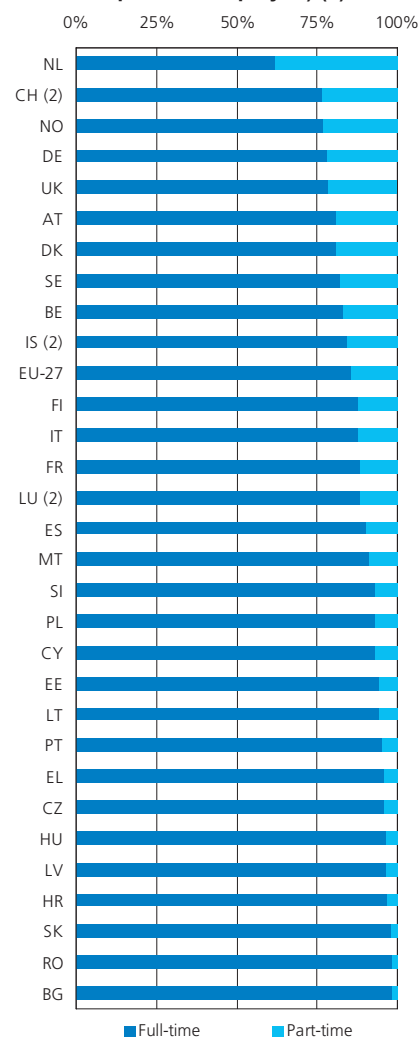
As regards part-time employment, the Netherlands stood out as having by far the highest part-time employment rate in 2006 (38.0 %), largely due to three out of every four women within the Dutch workforce being employed on a part-time basis. This situation contrasted vividly with the situation in Slovakia, Romania and Bulgaria where no more than 1 in 50 of the workforce was working on a part-time basis in 2006 (see Figure 1.22).

**Figure 1.21**  
**Employment breakdown by gender, business economy, 2006 (% share of total number of persons employed)**



(1) 2005.  
Source: Eurostat (LFS)

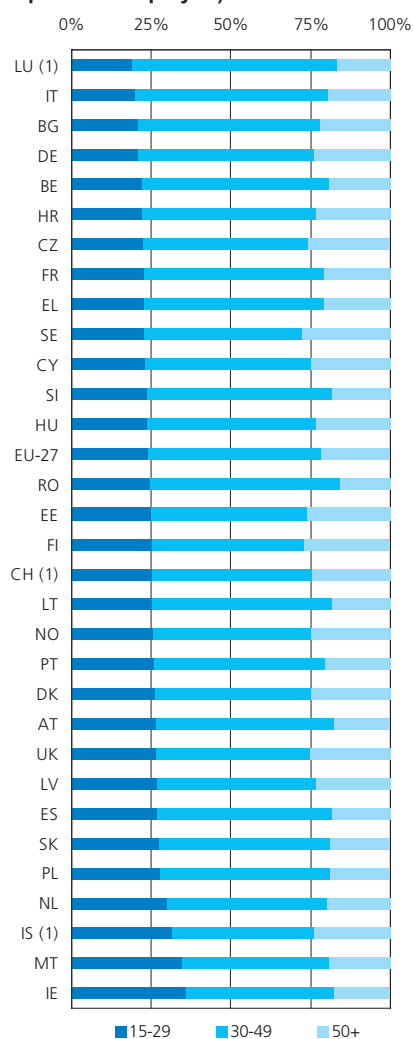
**Figure 1.22**  
**Employment breakdown by time at work, business economy, 2006 (% share of total number of persons employed) (1)**



(1) Ireland, not available.  
(2) 2005.  
Source: Eurostat (LFS)

Age profiles within the respective workforces of the Member States also reflect socio-economic characteristics and policies, including demographic trends such as an ageing population or a baby-boom cohort. The proportion of young workers in the business economy may reflect factors such as differences in higher education rates and the average length of higher education courses, as well as the availability of work and job placements. Nevertheless, the age profile of the business economy workforce tends to be relatively similar across the Member States at an aggregate level (see Figure 1.23). While some activities, for example, information, technology and communication-related sectors may favour younger workers that are more up-to-date with recent technological developments, at the other end of the age range, the proportion of older workers may be influenced, among many other factors, by pension rights, age-related wage schemes, and life-long learning programmes in particular activities. Between countries, there was a relatively high proportion of the Irish (35.7 %) and Maltese (34.7 %) business economy workforces composed of persons aged between 15 and 29 years old. In contrast, Luxembourg (19.3 %) and Italy (19.9 %) recorded the lowest proportion of young workers. The lowest proportion of the workforce aged over 50 years was reported in Romania (16.1 %), with relatively low shares also recorded in Luxembourg (16.7 %) and Ireland (17.3 %). Older workers made-up at least one quarter of the workforce in 2006 in Sweden, Finland, Estonia, the Czech Republic, the United Kingdom and Denmark.

**Figure 1.23**  
**Employment breakdown by age, business economy, 2006 (% share of total number of persons employed)**



(1) 2005.

Source: Eurostat (LFS)

1.6: EVOLUTION OF PRODUCTION, EMPLOYMENT AND TURNOVER

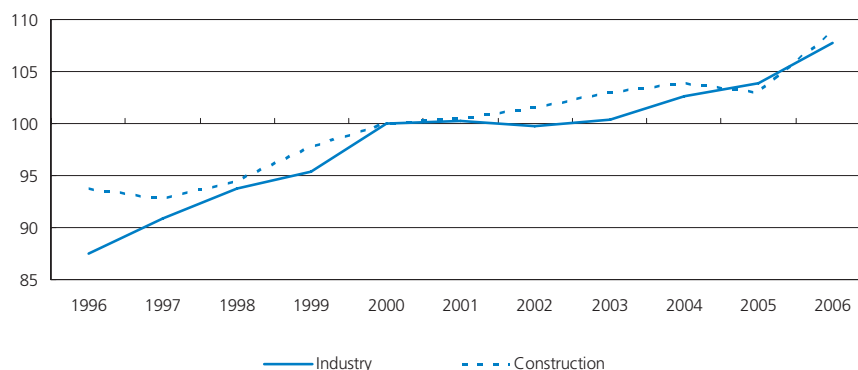
The index of production for industrial activities and that for construction shows the development of value added at constant prices. This indicator provides information on the speed and direction of structural change, in particular showing the cyclical evolution of activity (which is often related to the general economic developments within the whole economy). As no production index exists within short-term business statistics for service sectors an index of turnover is used instead to analyse the evolution of output. Note that the index of turnover for services is generally based on a current price series (and as a result includes the effects of price increases) – the retail trade sector is the only exception, as an index is available for measuring the volume of retail sales.

The EU-27 index of production for total industry (NACE Sections C to E) rose strongly between 1996 and 2000 (on average by 3.4 % per annum) during a period of rapid, global, economic expansion (see Figure 1.24). Thereafter, the production index stabilised, with little change between 2000 and 2003 (rising on average by 0.1 % per annum), since when there has been renewed vigour in the pace at which industrial output rose, with average growth of 2.4 % between 2003 and 2006. Growth quickened during this period, as industrial output in the EU-27 rose by 3.7 % in 2006 when compared with the year before.

The output of construction activities followed a somewhat different path, as there was a small contraction in the level of production in 1996 and 1997, after which there were successive year-on-year expansions through to 2004, although average growth was modest at 1.6 % per annum. After a year of stagnation in 2005, the EU-27's index of production for construction posted its highest year on year growth rate in 2006, as output rose by 5.6 %.

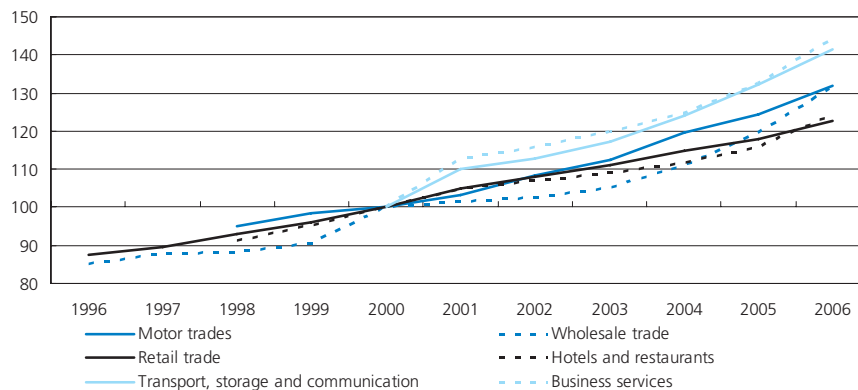
Among the service sectors, the EU-27 index of turnover for business services (NACE Divisions 72 and 74) rose particularly strongly in the period between 2000 and 2006, on average by 6.3 % per annum, as did the turnover index for transport, storage and communication services (NACE Section I), where growth averaged 6.0 % per annum – see Figure 1.25. The remaining four services that are presented in Figure 1.25 also reported a positive evolution to the development of sales, averaging between 3.5 % and 4.7 % per annum.

Figure 1.24 Index of production, working day adjusted, EU-27 (2000=100)



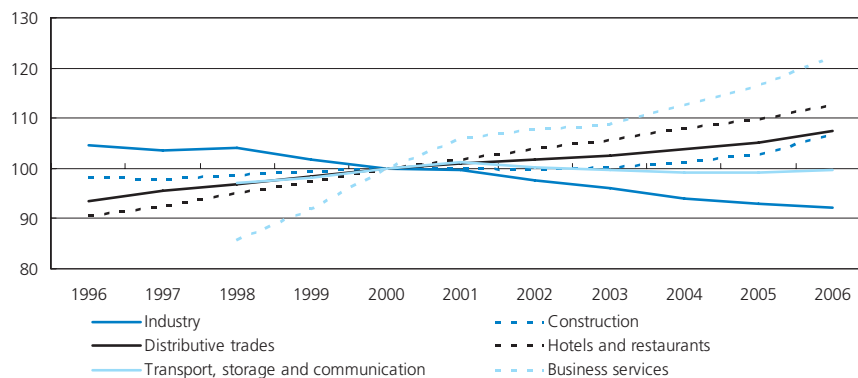
Source: Eurostat (STS)

Figure 1.25 Index of turnover, working day adjusted, EU-27 (2000=100)



Source: Eurostat (STS)

Figure 1.26 Index of employment, gross data, EU-27 (2000=100)



Source: Eurostat (STS)

Annualised short-term business statistics are also available to analyse the evolution of employment. The EU-27 index of employment for industrial activities showed a steady decline during the period 1996 to 2006, with reductions averaging 1.3 % per annum. In contrast, there was employment growth within

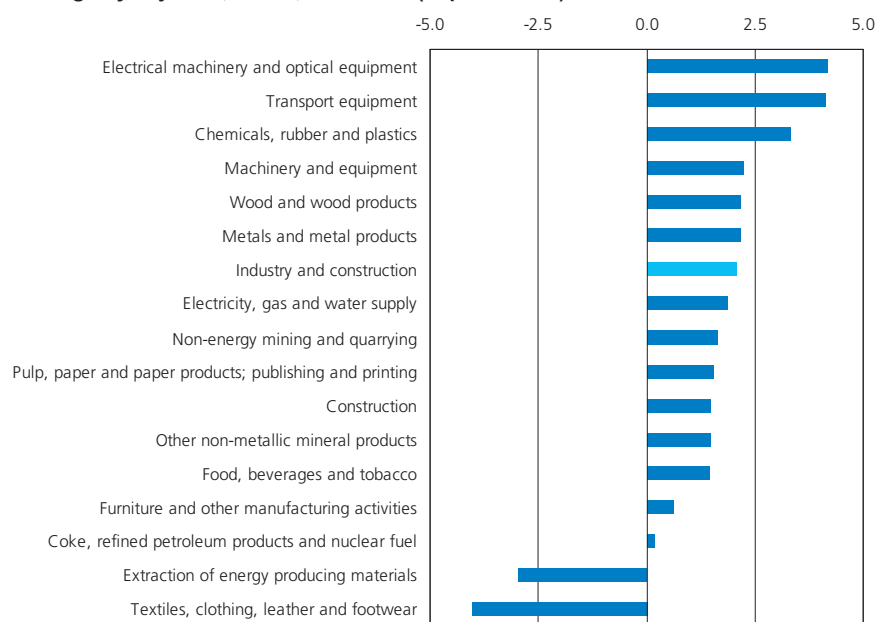
construction, as well as the four non-financial services that are presented in Figure 1.26. There were relatively fast rates of employment growth for business services (4.5 % per annum between 1998 and 2006), as well as for hotels and restaurants (2.2 % per annum between 1996 and 2006).

### EVOLUTION WITHIN INDUSTRIAL ACTIVITIES

EU-27 production indices for the majority of the NACE subsections within the industrial economy increased during the period between 1996 and 2006 (see Figure 1.27), with only two exceptions, the extraction of energy producing materials and the manufacture of textiles, clothing, leather and footwear.

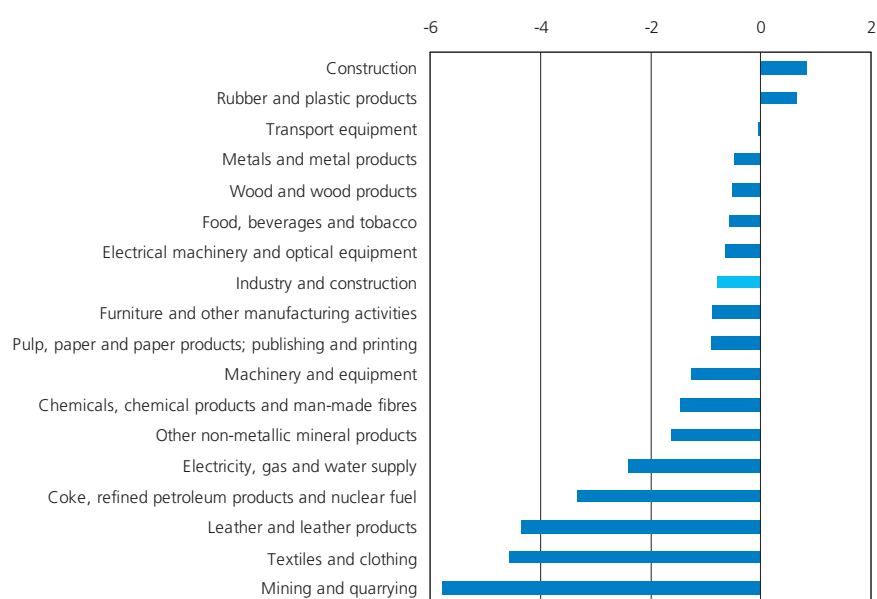
In contrast, the three activities (at the NACE subsection level of detail) within the EU-27's industrial economy that recorded the highest growth rates were electrical machinery and optical equipment (NACE Subsection DL), where output rose by an average of 4.2 % per year, transport equipment manufacturing (NACE Subsection DM), where output rose on average by 4.1 % per annum, and the manufacture of chemicals, rubber and plastics (NACE Subsections DG and DH), where production increased by 3.3 % per annum. Expansions in EU-27 industrial production were achieved, for the most part, with a reduced workforce – see Figure 1.28 – reinforcing the notion of productivity improvements. The only industrial subsection that reported an increase in its workforce was rubber and plastic products manufacturing, while there were also gains reported for construction. In both of these cases, average gains in output were in excess of the additional labour input (suggesting that productivity gains were also apparent in these two activities).

**Figure 1.27**  
Average annual growth rates, index of production for industrial activities, working day adjusted, EU-27, 1996-2006 (% per annum)



Source: Eurostat (STS)

**Figure 1.28**  
Average annual growth rates, index of employment for industrial activities, gross data, EU-27, 1996-2006 (% per annum)



Source: Eurostat (STS)

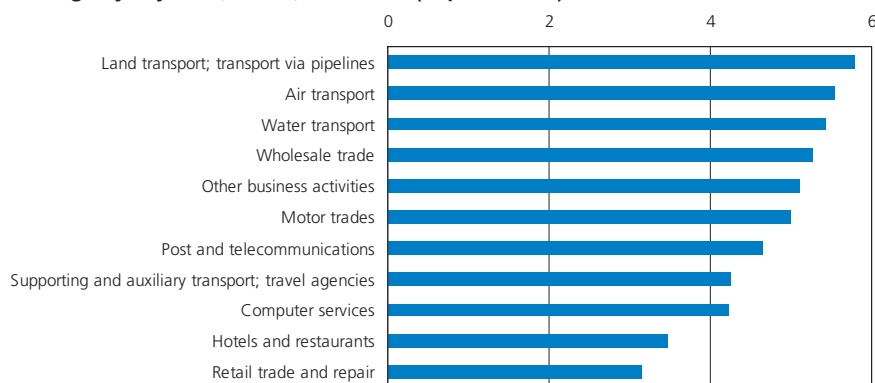


**EVOLUTION WITHIN SERVICE SECTORS**

During the five-year period from 2001 to 2006, the EU-27 index of turnover increased for each of the NACE divisions within the non-financial services sector for which data are available – see Figure 1.29. The highest rates of sales growth tended to be reported for transport services, with average growth of 5.8 % per annum for land transport and transport via pipelines (NACE Division 60), 5.6 % per annum for air transport (NACE Division 62), and 5.4 % per annum for water transport services (NACE Division 61). The slowest rates of turnover growth across the NACE divisions for non-financial services were registered for hotels and restaurants (3.5 % per annum) and for retail trade (3.1 % per annum).

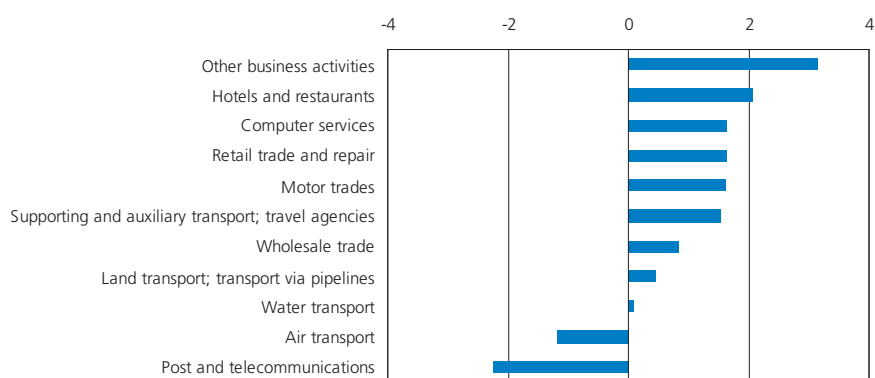
In contrast to the industrial economy, the evolution of employment within services sectors tended to show the number of persons employed rising for the majority of activities across the EU-27. The sharpest rate of increase between 2001 and 2006 was registered for one part of the business services sector, other business activities (NACE Division 74), where there was an average increase of 3.2 % in the number of persons employed. There were two service activities – air transport and post and telecommunications – that reported reductions in their respective workforces between 2001 and 2006 (see Figure 1.29).

**Figure 1.29** Average annual growth rates, index of turnover for service activities, working day adjusted, EU-27, 2001-2006 (% per annum)



Source: Eurostat (STS)

**Figure 1.30** Average annual growth rates, index of employment for service activities, gross data, EU-27, 2001-2006 (% per annum)



Source: Eurostat (STS)

## 1.7: EXTERNAL TRADE

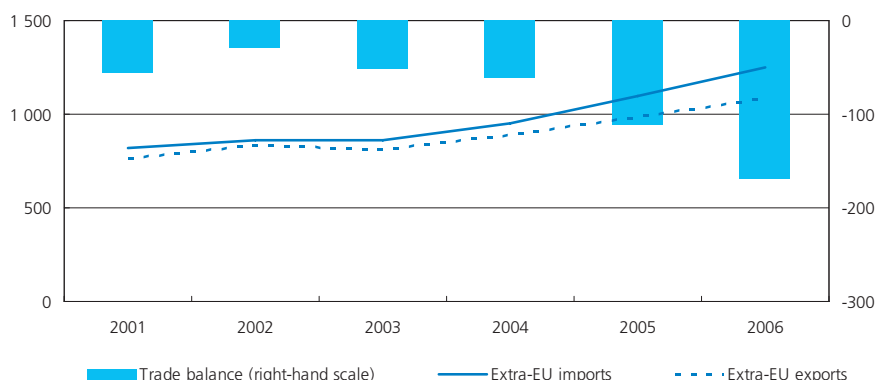
The world economy is increasingly inter-related, with foreign-controlled enterprises and globalisation making the distinction between domestic and non-domestic production less clear. With the successive removal of trade barriers (particularly those under the auspices of the World Trade Organisation's multilateral discussions) there has been a notable increase in world trade, which flourished initially with respect to the freeing-up of international trade in goods, and more recently some services.

There have been rapid changes in trade patterns in recent years, associated with emerging economies such as China and India accounting for a growing share of world trade across many different product areas (in particular those that are price-sensitive). There have also been structural changes in the origin of imports within particular product groupings, for example, the rapid growth in energy imports originating from the Russian Federation (an important global supplier of energy).

EU exports are mainly concentrated among medium-high technology products that are produced with low to intermediate labour skills. This means that the EU is exposed to competition from producers in emerging economies, resulting in some EU producers trying to shift their output to higher value, specialist products.

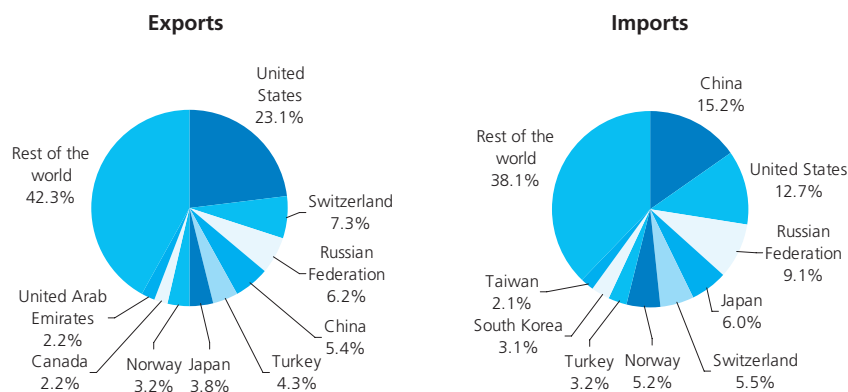
EU-27 external trade data shows (see Figure 1.31) that after having almost stagnated during the period 2001 to 2003 during a period of global slowdown, there was subsequently growth in the level of EU exports and imports through to 2006 as global economic fortunes improved. The EU-27 trade balance (the value of exports minus imports) for industrial goods resulted in a progressively larger deficit through to 2006, reflecting to some degree buoyant demand, changes in exchange rates, and the relative price of imports (in particular, higher prices for oil and gas which accounted for an increasing proportion of the EU-27's imports). The widening trade deficit for goods grew to EUR 169.5 billion by 2006.

**Figure 1.31**  
Evolution of external trade for industrial products, EU-27 (EUR billion)



Source: Eurostat (Comext)

**Figure 1.32**  
Main trading partners, industrial products, EU-27, 2006 (% share of total)



Source: Eurostat (Comext)

### EU-27 TRADE PARTNERS

The most important destination for EU-27 industrial exports in 2006 was the United States which accounted for a little less than a quarter (23.1 %) of the total (see Figure 1.32). The proportion of exports that were destined for the United States fell gradually in recent years, while a similar pattern was observed for the second largest market for EU-27 exports of industrial goods, namely Switzerland, which accounted for a 7.3 % share of total exports in 2006. The declining share of EU-27 exports to established, industrialised trading partners was offset by the growing importance of trade with Russia and China, whose combined market share rose to 11.6 % by 2006.

The relatively slow change in the structure of EU-27 exports by partner was in contrast to more rapid developments as regards the origin of EU-27 imports. The relative importance of the United States diminished considerably in recent years, as American imports accounted for 12.7 % of the total in 2006 (approximately half their share of a decade before). There was also a considerable reduction in relative share of Japanese imports, declining to 6.0 % of EU-27 imports in 2006. In contrast, the share of EU-27 imports that originated from China and Russia increased rapidly to reach 15.2 % and 9.1 % respectively by 2006.

Table 1.19

## External trade flows, EU-27, 2006

Chapter	Exports (EUR million)	Imports (EUR million)	Cover ratio (%)	Balance (EUR million)	Share in EU-27 industrial exports (%)	Share in EU-27 industrial imports (%)
<b>Industrial products</b>	1 082 468	1 251 974	86.5	-169 506	100.0	100.0
<b>2 Food, beverages and tobacco</b>	54 044	48 169	112.2	5 875	5.0	3.8
<b>3 Textiles, clothing, leather and footwear</b>	45 765	97 493	46.9	-51 728	4.2	7.8
<b>4 Wood and paper</b>	29 212	21 367	136.7	7 846	2.7	1.7
<b>5 Chemicals, rubber and plastics</b>	194 761	128 952	151.0	65 809	18.0	10.3
<b>6 Other non-metallic mineral products</b>	17 595	10 382	169.5	7 213	1.6	0.8
<b>7 Metals and metal products</b>	90 147	104 480	86.3	-14 333	8.3	8.3
<b>8 Machinery and equipment</b>	171 147	74 717	229.1	96 430	15.8	6.0
<b>9 Electrical machinery and optical equipment</b>	197 586	267 029	74.0	-69 443	18.3	21.3
<b>10 Transport equipment</b>	176 297	101 947	172.9	74 350	16.3	8.1
<b>11 Furniture; other manufactured goods n.e.c.</b>	29 549	40 692	72.6	-11 143	2.7	3.3
<b>12 Non-energy mining and quarrying</b>	13 694	31 812	43.0	-18 118	1.3	2.5
<b>13 Energy products, steam and hot water</b>	56 283	321 230	17.5	-264 947	5.2	25.7

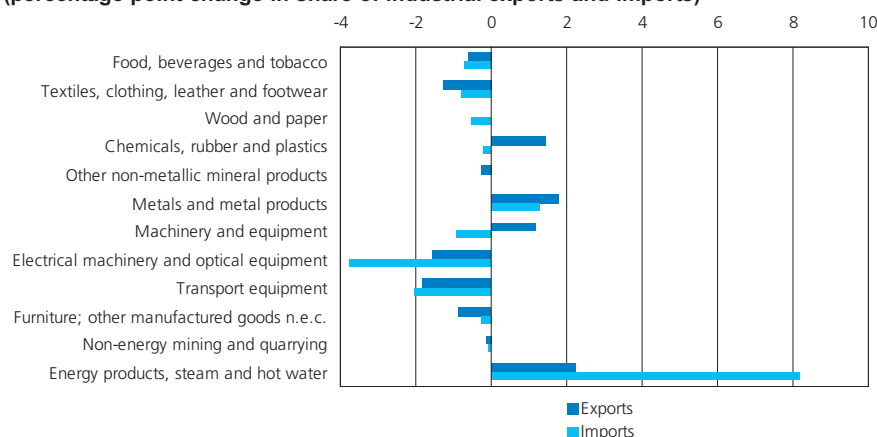
Source: Eurostat (Comext)

## EU-27 TRADE BY PRODUCT

Table 1.19 shows information relating to the external trade flows for the EU-27 broken down according to the aggregates used for the sectoral chapters employed within this publication. EU-27 imports of energy products and of electrical machinery and optical equipment together represented a little less than half (47.0 %) of all industrial imports in 2006. With relatively low levels of exports of energy products, the EU-27 recorded a trade deficit for energy products of EUR 264.9 billion in 2006. This was by far the largest deficit and dwarfed those recorded for electrical machinery and optical goods (EUR 69.4 billion) and textiles and textile products, leather and leather products (EUR 51.7 billion). Three product groupings stood out with relatively high EU-27 trade surpluses for industrial goods in 2006: namely, machinery and equipment (EUR 96.4 billion), transport equipment (EUR 74.3 billion) and chemicals, rubber and plastics (EUR 65.8 billion).

Figure 1.33 presents information on the changing composition of industrial exports and imports for the EU-27. These relative shares reflect, to some degree, differences in prices between 2001 and 2006, which is mainly reflected in the growing share of energy products for both imports and exports and the relatively modest increase in the share of textiles, clothing, leather and footwear (despite considerable volume increases for certain products within this group). Exports of electrical and optical equipment continued to record the highest share of EU-27 industrial exports in 2006, although the 18.3 % share was somewhat reduced in relation to five years before. In contrast, EU-27 exports of chemicals, rubber and plastics rose, with their relative importance gaining 1.4 percentage points between 2001 and 2006, to reach 18.0 % of EU-27 industrial exports.

Figure 1.33

Structural change of external trade, EU-27, 2001-2006  
(percentage point change in share of industrial exports and imports)

Source: Eurostat (Comext)

Aside from the rapid evolution of energy imports (whose share of EU-27 industrial imports increased by 8.2 percentage points between 2001 and 2006), the next highest relative increase was recorded for metals and metal products (with a gain of 1.3 percentage points). The largest reduction was recorded for electrical machinery and optical equipment, whose share of EU-27 imports fell by 3.8 percentage points between 2001 and 2006. Note that the price of certain electrical machinery and optical equipment products tends to fall as a result of technological gains and competition (for example, the price of a home computer has fallen in the last decade, while the specification of a typical model has increased considerably).

**TRADE BY MEMBER STATE**

While external trade data relating to the EU-27 are presented by treating the EU as a single trading entity, and cover only trade flows between the EU and non-member countries, the external trade data reported for each of the Member States concerns both trade flows with non-member countries (extra-EU trade) and that with other Member States (hereafter referred to as intra-EU trade). Germany recorded by far the largest trade surplus in industrial goods (EUR 150.6 billion) in 2006; with exports covering imports by 123.6 % (see Table 1.20). Much of the German trade surplus in industrial goods reflected German surpluses for machinery and equipment and for transport equipment, output from activities in which Germany was particularly specialised. The highest cover ratio among the Member States in 2006 was recorded for Ireland (160.0 %), where basic chemicals and pharmaceuticals accounted for much of the trade surplus.

Spain and the United Kingdom recorded the largest trade deficits for industrial goods in 2006 (EUR 91.4 billion and EUR 77.0 billion), although Greece and Cyprus had the lowest cover ratios (29.9 % and 14.2 % respectively). It is important to note that the data presented only refer to the external trade of industrial goods and countries such as Spain (tourism) and the United Kingdom (financial and business services) may have considerable net exports of various services.

**Table 1.20**  
**External trade, industrial goods, 2006**

	Exports		Imports		Trade balance (EUR million)	Cover ratio (%)
	(EUR million)	Share of total for the Member States (%)	(EUR million)	Share of total for the Member States (%)		
<b>BE</b>	281 617	8.4	271 359	7.9	10 258	103.8
<b>BG</b>	11 126	0.3	14 819	0.4	-3 694	75.1
<b>CZ</b>	74 083	2.2	70 704	2.1	3 379	104.8
<b>DK</b>	67 146	2.0	64 681	1.9	2 464	103.8
<b>DE</b>	789 162	23.7	638 595	18.6	150 567	123.6
<b>EE</b>	7 024	0.2	9 663	0.3	-2 639	72.7
<b>IE</b>	84 537	2.5	52 843	1.5	31 694	160.0
<b>EL</b>	14 554	0.4	48 721	1.4	-34 168	29.9
<b>ES</b>	151 436	4.5	242 828	7.1	-91 392	62.4
<b>FR</b>	364 936	10.9	413 309	12.1	-48 372	88.3
<b>IT</b>	314 407	9.4	312 584	9.1	1 823	100.6
<b>CY</b>	747	0.0	5 276	0.2	-4 528	14.2
<b>LV</b>	4 426	0.1	8 439	0.2	-4 013	52.4
<b>LT</b>	10 663	0.3	14 768	0.4	-4 104	72.2
<b>LU</b>	17 125	0.5	19 406	0.6	-2 281	88.2
<b>HU</b>	53 375	1.6	53 455	1.6	-80	99.9
<b>MT</b>	2 078	0.1	3 095	0.1	-1 016	67.2
<b>NL</b>	290 196	8.7	282 229	8.2	7 968	102.8
<b>AT</b>	105 944	3.2	107 781	3.1	-1 836	98.3
<b>PL</b>	86 226	2.6	95 329	2.8	-9 103	90.5
<b>PT</b>	31 278	0.9	48 251	1.4	-16 972	64.8
<b>RO</b>	25 141	0.8	39 959	1.2	-14 818	62.9
<b>SI</b>	18 315	0.5	18 692	0.5	-377	98.0
<b>SK</b>	32 236	1.0	35 732	1.0	-3 496	90.2
<b>FI</b>	57 587	1.7	50 652	1.5	6 934	113.7
<b>SE</b>	108 369	3.3	93 677	2.7	14 691	115.7
<b>UK</b>	330 620	9.9	407 581	11.9	-76 961	81.1

Source: Eurostat (Comext)

Table 1.21

## Three most specialised Member States, 2006 (% specialisation relative to the EU-27)

Chapter	Exports			Imports		
	Most	Second	Third	Most	Second	Third
2 Food, beverages and tobacco	Denmark	Greece	Latvia	Denmark	Malta	Cyprus
3 Textiles, clothing, leather and footwear	Romania	Bulgaria	Portugal	Romania	Bulgaria	Italy
4 Wood and paper	Latvia	Finland	Sweden	Denmark	Latvia	Estonia
5 Chemicals, rubber and plastics	Ireland	Belgium	Cyprus	Belgium	Poland	Ireland
6 Other non-metallic mineral products	Portugal	Czech Republic	Spain	Latvia	Cyprus	Bulgaria
7 Metals and metal products	Bulgaria	Luxembourg	Greece	Slovenia	Luxembourg	Czech Republic
8 Machinery and equipment	Italy	Germany	Slovenia	Bulgaria	Poland	Romania
9 Electrical machinery and optical equipment	Malta	Luxembourg	Hungary	Luxembourg	Malta	Ireland
10 Transport equipment	Spain	Germany	France	Spain	France	Slovakia
11 Furniture; other manufactured goods n.e.c.	Slovenia	Poland	Lithuania	Cyprus	United Kingdom	Denmark
12 Non-energy mining and quarrying	Belgium	Greece	Bulgaria	Bulgaria	Finland	Belgium
13 Energy products, steam and hot water	Lithuania	Estonia	Greece	Lithuania	Greece	Netherlands

Source: Eurostat (Comext)

Relative export and import specialisation in specific products is a function of the size of the domestic production and the international and domestic demand. These specialisation ratios are defined in terms of the share of a country's exports (imports) of a certain product in its total exports (imports). The ratio for each country is then divided by the same ratio for the sum of the EU-27 Member States and expressed as a percentage; as such, any values over 100 % represent country-product pairings where the economy is relatively specialised in exporting

(importing), whereas values of less than 100 % indicate that the country-product pairing is relatively unspecialised. Given the size and the fact that most of the larger Member States produce, export and import a wide range of products, it is more likely that specialisation ratios are high in relatively small countries or countries whose industrial activities are concentrated within relatively few activities – see Table 1.21. The main exception to this rule is the export of machinery and equipment (where Italy and Germany were the most

specialised) and transport equipment (where Spain, Germany and France were the most specialised). Although not always the case, there was a relationship between countries specialised in producing and exporting certain products, for example, exports of textiles, clothing, leather and footwear products from Romania, Bulgaria and Portugal, or exports of wood and paper products from Latvia, Finland and Sweden.

## 1.8: THE BUSINESS ECONOMIES OF BULGARIA AND ROMANIA

The accession of Bulgaria and Romania to the EU at the start of 2007 marked the second wave of the fifth enlargement of the European Union and resulted in an increase for the EU of around 30 million inhabitants.

Overall living standards in both of these countries, as measured by GDP per capita in PPS, were relatively low. Bulgarian GDP per capita equated to 36.4 % of the EU-27 average in 2006, while the corresponding ratio for Romania was slightly higher at 37.3 %. Both of these ratios were considerably lower than that recorded for Poland (53.4 %), which had the next lowest ratio among the 27 Member States.

While living standards are lower than in the EU as a whole, both the Bulgarian and the Romanian economies have witnessed rapid GDP growth since 2000, with annual growth rates that were more than double those recorded for the EU-27. Reforms during the period leading up to accession appear to have stimulated economic activity in both Bulgaria and Romania, as witnessed by an increase in foreign investment (especially in manufacturing areas), while rising incomes have stimulated demand for consumer goods.

The economic structures of Bulgaria and Romania differed considerably when compared with the overall structure of the EU-27's economy. Nowhere is this difference more apparent than for the agriculture, hunting, forestry and fishing sector, which accounted for 8.5 % of Bulgarian and 9.6 % of Romanian value added, while the EU-27 average was 1.9 %. Bulgaria and Romania displayed a relatively high degree of specialisation in industrial and distribution activities, with industry accounting for 25.6 % of total value added in Bulgaria and 27.3 % in Romania (compared with an EU-27 average of 20.3 %). With the exception of distribution activities, both Bulgaria and Romania had relatively small service sectors, in particular, the relative weight of public administration, health and education, which accounted for 13.8 % of value added in Bulgaria and 15.1 % in Romania in 2006 (compared with an EU-27 average of 22.4 %).

Table 1.22

## Main indicators, 2004 (% of non-financial business economy)

Chapter		No. of enterprises			Turnover			Value added			Persons employed		
		EU-27	BG	RO	EU-27	BG	RO	EU-27	BG	RO	EU-27	BG	RO
	<b>Industry (1)</b>	12.1	12.1	15.0	36.5	47.8	51.1	35.3	36.8	41.1	30.0	41.5	49.9
2	Food, beverages & tobacco	1.6	2.6	2.9	4.9	5.5	4.7	3.9	6.0	6.1	3.8	6.4	5.2
3	Textiles, clothing, leather & footwear (1)	1.4	2.5	:	1.3	5.6	:	1.3	2.6	:	2.7	11.8	
4	Wood & paper (1)	1.1	1.0	2.1	1.5	1.3	1.9	1.5	1.1	1.8	1.6	1.8	2.7
5	Chemicals, rubber & plastics (1)	0.5	0.8	0.9	4.6	3.2	3.3	4.9	2.3	3.4	3.0	2.5	2.5
6	Other non-metallic mineral products (2)	0.5	0.4	0.6	1.1	2.3	2.5	1.4	1.3	1.4	1.3	1.3	1.8
7	Metals & metal products	2.1	1.4	1.5	3.7	4.7	5.9	4.2	4.6	4.8	4.0	3.3	4.1
8	Machinery & equipment	0.9	0.8	0.4	2.8	3.0	2.3	3.4	1.8	1.6	2.9	3.7	3.2
9	Electrical machinery & optical equipment (2)	1.0	0.8	0.6	3.3	1.8	2.5	3.7	1.2	1.6	2.9	1.8	2.3
10	Transport equipment (2)	0.2	0.2	0.3	4.5	0.7	3.1	3.5	0.4	2.4	2.6	0.8	3.2
11	Furniture & other manufacturing (3)	1.2	0.9	1.2	0.9	:	1.7	1.0	:	1.2	1.5	:	2.9
12	Non-energy mining & quarrying	0.1	0.1	0.1	0.2	1.9	0.8	0.3	0.8	0.2	0.2	0.7	0.7
13	Energy (1)	0.1	0.1	:	6.0	:	:	4.7	:	:	1.6	:	:
14	Recycling & water supply (1) (4)	0.1	0.1	0.4	0.4	1.5	1.2	0.5	:	1.2	0.4	:	1.5
15	<b>Construction</b>	14.3	5.9	6.7	6.8	5.8	5.8	8.5	5.5	6.3	10.5	7.6	9.5
	<b>Non-financial services</b>	73.9	81.9	78.3	58.6	46.4	43.1	55.2	57.7	52.6	59.1	50.9	40.5
16	Motor trades	4.1	3.6	3.5	6.2	2.7	2.9	3.0	5.0	5.0	3.3	2.8	2.3
17	Wholesale trade	8.9	9.6	13.7	20.6	9.0	9.5	9.1	31.9	24.7	7.6	8.0	7.8
18	Retail trade & repair	19.8	39.0	33.6	10.7	4.6	5.1	7.5	6.9	9.7	13.6	14.2	11.0
19	Hotels & restaurants	8.5	9.6	4.6	2.0	2.7	1.4	3.2	1.5	1.0	6.9	6.0	2.6
20	Transport services (1)	5.9	9.0	6.0	5.4	10.1	8.5	7.1	6.2	5.1	6.9	9.1	6.8
21	Communications & media (3)	1.4	1.1	1.7	3.9	12.2	8.3	6.7	3.6	3.4	3.9	3.9	2.9
22	Business services	20.6	8.8	13.6	7.6	4.8	6.2	14.5	2.6	3.7	15.5	6.9	6.5
23	Real estate, renting & R&D (3)	5.7	1.8	2.6	3.3	1.3	2.1	6.0	0.6	0.9	2.8	0.9	1.5

(1) EU-27, rounded estimates based on non-confidential data.

(2) EU-27, rounded estimates based on non-confidential data for share of number of persons employed.

(3) EU-27, rounded estimates based on non-confidential data, except for share of number of enterprises.

(4) Bulgaria, 2003.

Source: Eurostat (SBS)

## STRUCTURAL PROFILE OF THE BUSINESS ECONOMY

Structural business statistics provide further insight into the structure of the Bulgarian and Romanian non-financial business economies. More than one third of all enterprises in the non-financial business economies of Bulgaria and Romania were active within the retail trade and repair sector in 2004 (see Table 1.22), whereas in the EU-27 around one fifth were in this activity. As with the EU-27 as a whole, the economic importance of these retail activities was considerably reduced in Bulgaria and Romania when measured in terms of their contribution to value added, turnover or employment, although this pattern was even stronger in Bulgaria and Romania, suggesting that a higher proportion of these retail enterprises were very small, family concerns often with no salaried employees.

On the basis of the activity aggregates used for the sectoral chapters that follow in the remainder of this publication, wholesale trade was by far the most important activity in terms of value added, with a 31.9 % share of the non-financial business economy in Bulgaria and a 24.7 % share in Romania (EU-27 average: 9.1 %).

There was also a relatively high degree of specialisation (in value added terms) within the food, beverages and tobacco manufacturing sector, which accounted for upwards of 6 % of total value added in the non-financial business economies of Bulgaria and Romania, compared with just 3.9 % in the EU-27. The textiles, clothing, leather and footwear manufacturing sector generated 2.6 % of non-financial business economy added value in 2004 in Bulgaria, which was twice the EU-27 average: no data are available for Romania which is nevertheless known to be specialised in some of these activities.

In contrast, the role of business services was particularly under-represented, as these activities accounted for just 2.6 % of total value added in the Bulgarian non-financial business economy and 3.7 % of the total in Romania, compared with an EU-27 average of 14.5 %.

Many commentators agree that the structure of both the Bulgarian and Romanian economies will change significantly (as has been the case in many of the ten Member States that joined the EU in 2004), as many family-based and co-operative enterprises specialised in agriculture or retail activities that were created after the change in economic system at the end of the 1980s and during the 1990s are gradually replaced by larger, national and multi-national players (for example, through the development of retail chains and commercial shopping centres).

## COSTS, PRODUCTIVITY AND PROFITABILITY

Bulgaria and Romania were both characterised as having a relatively low proportion of their total expenditure devoted to personnel costs in 2004 (see Table 1.23). Relatively low average personnel costs, to some degree, explain this low share as well as the counterbalancing high share of gross tangible investment, which was particularly the case in Romania where the investment share reached 12.9 % within the non-financial business economy as a whole, compared with an EU-27 average of 4.9 %.

At an aggregated sectoral level of detail, the share of personnel costs and of gross tangible investment in total expenditure was generally higher among industrial activities than non-financial services in both Bulgaria and Romania in 2004. Conversely, the share of purchases of goods and services accounted for a relatively high share of total expenditure in Bulgaria (87.8 %) and Romania (82.9 %) within the non-financial services sector – influenced by the relatively high degree of specialisation within distribution related activities in both economies.

In the EU-27 as a whole, there was little difference in the cost structures between industry and non-financial services in 2004, while labour-intensive construction activities had a higher share of personnel costs in total expenditure.

Table 1.24 shows two ratios that detail productivity and profitability measures according to the aggregates used for the sectoral chapters in this publication. The wage adjusted labour productivity ratio (value added per person employed divided by average personnel costs per employee) for the non-financial business economy in 2004 was considerably higher in both Bulgaria (189.9 %) and Romania (194.2 %) than the EU-27 average (148.0 %). This productivity ratio was particularly high in Bulgaria across industrial activities (203.4 %), while in Romania it was the non-financial services activities that posted the highest ratio (221.0 %); in both cases the added value generated per person employed was more than twice the average personnel costs.

Profitability, as measured by the gross operating rate (gross operating surplus divided by turnover) was lower in the non-financial business economies of Bulgaria (8.8 %) and Romania (9.7 %) than in the EU-27 (11.0 %) in 2004. There were however considerable differences in the gross operating rates between the main economic sectors of industry and non-financial services, as gross operating rates for the industrial economies of Bulgaria and Romania were considerably higher than

Table 1.23  
Total expenditure, 2004 (%)

	Value (EUR million)				Share (% of total expenditure)		
	Purchases of goods & services	Personnel costs	Gross tangible investment	Purchases of goods & services	Personnel costs	Gross tangible investment	
<b>Non-financial business economy</b>							
<b>EU-27 (1)</b>	18 160 000	14 300 000	2 970 000	890 000	78.7	16.4	4.9
<b>BG</b>	52 432	44 516	3 726	4 190	84.9	7.1	8.0
<b>RO</b>	118 661	92 496	10 862	15 302	78.0	9.2	12.9
<b>Industry</b>							
<b>EU-27 (1)</b>	6 410 000	5 010 000	1 110 000	290 000	78.2	17.3	4.5
<b>BG</b>	18 120	14 559	1 867	1 694	80.4	10.3	9.3
<b>RO</b>	49 691	35 982	5 913	7 796	72.4	11.9	15.7
<b>Construction</b>							
<b>EU-27</b>	1 217 358	893 047	283 893	40 419	73.4	23.3	3.3
<b>BG</b>	3 222	2 660	277	285	82.6	8.6	8.8
<b>RO</b>	8 103	6 083	911	1 110	75.1	11.2	13.7
<b>Non-financial services</b>							
<b>EU-27</b>	10 490 958	8 356 481	1 575 773	558 704	79.7	15.0	5.3
<b>BG</b>	31 091	27 296	1 583	2 211	87.8	5.1	7.1
<b>RO</b>	60 867	50 432	4 039	6 396	82.9	6.6	10.5

(1) Rounded estimates based on non-confidential data.  
Source: Eurostat (SBS)

Table 1.24  
Productivity and profitability, 2004 (%)

Chapter	Wage adjusted labour productivity			Gross operating rate		
	EU-27	BG	RO	EU-27	BG	RO
<b>1 Non-financial business economy (1)</b>	148.0	189.9	194.2	11.0	8.8	9.7
<b>Industry (1)</b>	157.0	203.4	184.6	10.6	11.0	11.3
<b>2 Food, beverages &amp; tobacco</b>	171.7	182.0	206.6	9.8	7.1	7.9
<b>3 Textiles, clothing, leather &amp; footwear (1)</b>	134.6	144.6	:	8.7	11.4	:
<b>4 Wood &amp; paper (1)</b>	143.0	185.6	206.2	10.3	9.7	10.9
<b>5 Chemicals, rubber &amp; plastics (1)</b>	171.0	215.3	209.3	12.0	12.1	10.0
<b>6 Other non-metallic mineral products (1)</b>	160.0	286.7	253.6	14.2	19.1	20.6
<b>7 Metals &amp; metal products</b>	140.2	208.4	221.2	10.3	8.9	13.5
<b>8 Machinery &amp; equipment</b>	129.2	138.3	116.9	8.4	8.0	4.8
<b>9 Electrical machinery &amp; optical equipment (1)</b>	141.0	178.4	176.1	9.7	11.3	13.0
<b>10 Transport equipment (1)</b>	129.0	147.9	145.8	4.8	9.5	8.1
<b>11 Furniture &amp; other manufacturing (1)</b>	127.0	:	158.6	9.4	:	10.5
<b>12 Non-energy mining &amp; quarrying</b>	188.7	290.8	130.7	18.2	25.3	14.6
<b>13 Energy (1)</b>	:	:	:	14.6	:	:
<b>14 Recycling &amp; water supply (1)</b>	216.0	:	153.0	20.0	:	7.0
<b>15 Construction</b>	123.7	158.7	136.2	11.6	7.0	5.0
<b>Non-financial services</b>	148.4	184.7	221.0	11.2	7.5	9.1
<b>16 Motor trades</b>	151.3	221.8	289.3	5.8	5.2	7.7
<b>17 Wholesale trade</b>	157.6	238.1	251.6	5.4	2.9	4.7
<b>18 Retail trade &amp; repair</b>	129.0	117.2	170.5	7.4	4.9	4.6
<b>19 Hotels &amp; restaurants</b>	127.0	160.3	168.9	15.5	14.6	12.2
<b>20 Transport services (1)</b>	140.0	139.3	198.7	13.3	12.5	16.6
<b>21 Communications &amp; media (1)</b>	197.0	374.4	291.7	23.6	40.2	32.3
<b>22 Business services</b>	126.8	139.8	190.2	17.2	12.0	16.3
<b>23 Real estate, renting &amp; R&amp;D (1)</b>	280.0	259.0	267.7	35.8	27.0	31.1

(1) EU-27, rounded estimates based on non-confidential data.  
Source: Eurostat (SBS)

those for construction or non-financial services (while for the EU-27 the rate remained almost identical between these three main aggregates). Within industry, (subject to data availability) gross operating rates for Bulgaria and Romania were higher than the EU-27 for the manufacturing of transport equipment, electrical machinery and optical equipment, other non-metallic mineral products, and non-energy mining and quarrying.

There were a number of non-financial services sectors where profitability was considerably higher than the non-financial business economy average, in particular, communications and media, and real estate, renting and R&D. In both of these sectors the relatively high gross operating rates for Bulgaria and Romania were synonymous with high rates for the EU-27 as a whole.

#### ENTERPRISE DEMOGRAPHY AND SIZE CLASS ANALYSIS

Table 1.25 presents an analysis within the non-financial business economy by size class for 2004. While 57.0 % of the EU-27's value added was generated by small and medium-sized enterprises (with less than 250 persons employed), the corresponding shares in Bulgaria and Romania were both under the threshold of 50 %, standing at 49.5 % and 44.5 % respectively. These figures hid a tendency for a higher proportion of value added to be created in medium-sized enterprises (with 50 to 249 persons employed) in Bulgaria and Romania, whereas micro enterprises (with 1 to 9 persons employed) generated a relatively low proportion of Bulgarian and Romanian value added in relation to the EU-27 average.

**Table 1.25** Breakdown of activity by size class, 2004 (% share of total) (1)

	Value added					No. of persons employed				
	SMEs	Micro	Small	Med.	Large	SMEs	Micro	Small	Med.	Large
<b>Non-financial business economy</b>										
<b>EU-27 (1)</b>	57.0	20.2	18.8	17.9	43.0	67.1	29.6	21.0	16.9	33.1
<b>BG</b>	49.5	14.3	15.8	19.3	50.5	71.7	29.3	21.3	21.0	28.3
<b>RO</b>	44.5	12.3	13.1	19.1	55.5	58.2	18.5	17.2	22.5	41.8
<b>Industry</b>										
<b>EU-27 (2)</b>	41.8	7.0	14.2	21.2	59.8	56.7	13.0	19.6	24.1	44.5
<b>BG</b>	35.4	3.1	9.7	22.6	64.6	57.4	8.9	19.1	29.4	42.6
<b>RO</b>	26.6	2.9	7.1	16.6	73.4	41.9	5.5	11.9	24.4	58.1
<b>Construction</b>										
<b>EU-27 (3)</b>	82.5	33.1	31.9	17.6	17.5	88.2	42.6	30.4	15.4	11.8
<b>BG</b>	77.8	16.8	25.5	35.5	22.2	81.9	19.3	29.8	32.8	18.1
<b>RO</b>	87.2	17.0	24.3	45.9	12.8	68.8	14.5	21.0	33.4	31.2
<b>Non-financial services</b>										
<b>EU-27 (4)</b>	62.7	26.9	19.9	16.0	37.4	68.3	35.6	19.3	13.4	31.7
<b>BG</b>	60.4	25.6	20.9	13.9	39.6	81.7	47.4	21.8	12.5	18.3
<b>RO</b>	60.0	22.8	18.6	18.5	40.0	75.9	35.4	22.8	17.7	24.1

(1) Rounded estimates based on non-confidential data.

(2) Rounded estimates based on non-confidential data for value added and for medium-sized and large enterprises for number of persons employed.

(3) Rounded estimates based on non-confidential data for micro and small enterprises for number of persons employed.

(4) Rounded estimates based on non-confidential data, except for micro enterprises.

Source: Eurostat (SBS)

In Bulgaria, some 71.7 % of those employed in the non-financial business economy worked in a small or medium-sized enterprise, which was 1.4 times as high as the corresponding share of these enterprises in non-financial business economy value added.

In Romania, large enterprises were relatively important within the industrial and construction sectors, where they employed 58.1 % and 31.2 % of the workforce, compared with EU-27 averages of 44.5 % and 11.8 % respectively. This pattern was repeated as large enterprises in Romania generated almost three quarters (73.4 %) of industrial value added. However, the productivity of large construction enterprises in Romania was relatively low, as they generated only 12.8 % of the construction sector's value added.



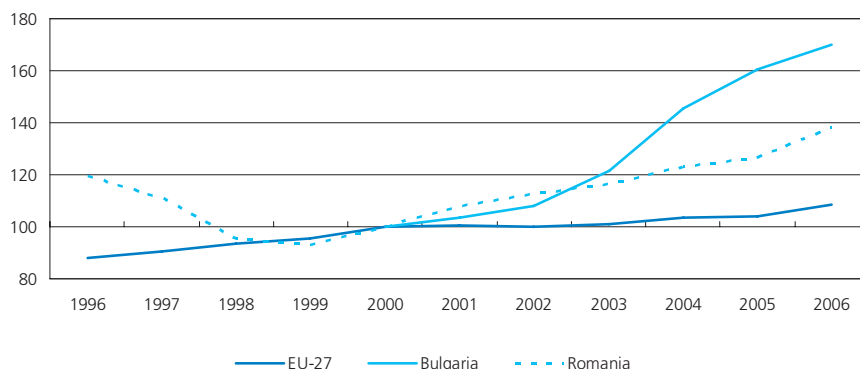
**EVOLUTION OF PRODUCTION**

The past decade has seen greater amplitude to changes in the index of production for industry and construction in Bulgaria and Romania, than for the EU-27.

A considerable downturn in industrial and construction activity was recorded in Romania from the middle to the end of the 1990s, as output declined to a low point in 1999 (no data are available for this period for Bulgaria). Short-term business statistics show that the evolution of industrial and construction activity within Bulgaria and Romania thereafter grew at a considerably faster pace than in the EU-27 (see Figure 1.34).

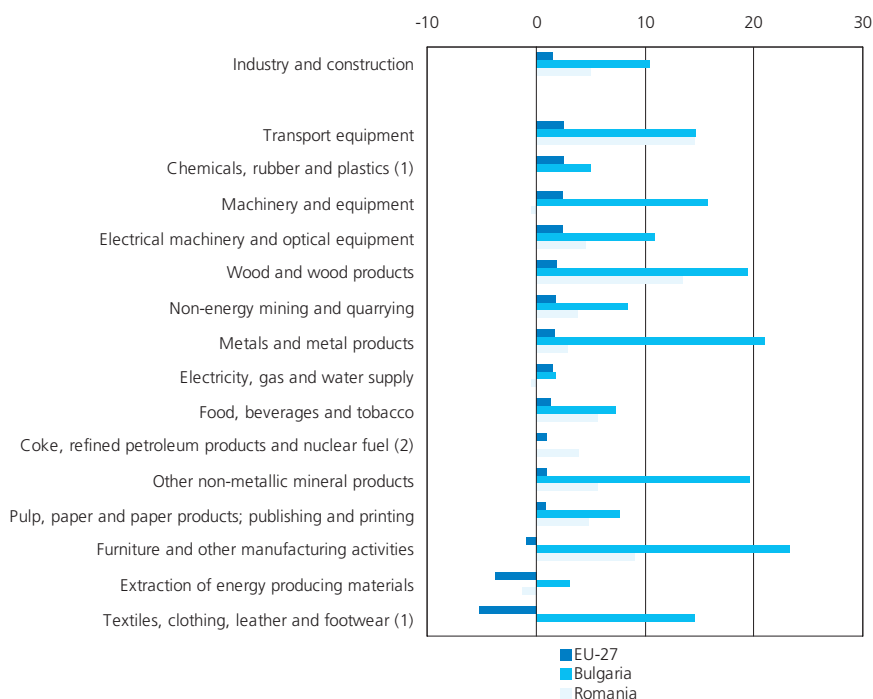
Figure 1.35 shows that the EU-27 index of production for industry and construction rose, on average, by 1.5 % per annum between 2001 and 2006, while the corresponding rate for Romania was 5.0 % and that for Bulgaria averaged 10.4 %. Subject to data availability and according to a breakdown of aggregates at the NACE subsection level of detail, the highest growth rates within industry in Bulgaria were recorded for furniture and other manufacturing activities; metals and metal products; other non-metallic mineral products; and wood and wood products – all of which registered average gains of around 20 % per annum over the period considered. Growth rates for industrial output were less rapid in Romania, although they were generally higher than for the EU-27, the highest being recorded for transport equipment manufacturing (14.6 %).

**Figure 1.34** Index of production, working day adjusted, industry and construction (2000=100)



Source: Eurostat (STS)

**Figure 1.35** Average annual growth rates, index of production, working day adjusted, 2001-2006 (% per annum)



(1) Romania, not available.  
 (2) Bulgaria, not available.  
 Source: Eurostat (STS)

**EXTERNAL TRADE**

A breakdown of the structure of external trade for 2006 according to the breakdown of aggregates used for the sectoral chapters in this publication shows that more than two thirds (68.3 %) of EU-27 industrial exports were concentrated among four product groups – namely: transport equipment; electrical machinery and optical equipment; chemicals, rubber and plastics; and machinery and equipment.

Bulgarian industrial exports were concentrated among energy products, steam and hot water (29.0 %) and metals and metal products (27.0 %), a pattern that was repeated in Romania, where shares of 24.0 % and 25.0 % were recorded for the same product groups – see Table 1.26. The main difference in the composition of exports was the relatively high share of Romanian exports from transport equipment products (14.5 % of the industrial total) when compared with a 2.3 % share in Bulgaria – which resulted from a high degree of exports of motor vehicles and associated parts and accessories.

The two largest product groups for EU-27 imports in 2006 were energy products, steam and hot water (25.7 % of the industrial total) and electrical machinery and optical equipment (21.3 %). This pattern was to some degree repeated in Romania, as more than a third (35.2 %) of Romanian industrial imports was composed of energy products, steam and hot water. On the other hand, some 18.1 % of industrial imports in Bulgaria were composed of metals and metal products, while non-energy mining and quarrying products accounted for 15.6 % of Bulgarian imports (in contrast to shares of 3 % or less in Romania and the EU-27).

Table 1.26

**Structure of external trade, 2006 (% of industrial products)**

Chapter	Exports			Imports		
	EU-27	BG	RO	EU-27	BG	RO
<b>2 Food, beverages and tobacco</b>	5.0	6.2	1.3	3.8	5.4	5.5
<b>3 Textiles, clothing, leather and footwear</b>	4.2	4.1	3.2	7.8	8.0	6.7
<b>4 Wood and paper</b>	2.7	2.3	6.2	1.7	1.9	0.8
<b>5 Chemicals, rubber and plastics</b>	18.0	11.7	12.9	10.3	9.4	8.7
<b>6 Other non-metallic mineral products</b>	1.6	2.7	0.9	0.8	2.4	1.3
<b>7 Metals and metal products</b>	8.3	27.0	25.0	8.3	18.1	8.2
<b>8 Machinery and equipment</b>	15.8	5.4	6.7	6.0	7.9	5.9
<b>9 Electrical machinery and optical equipment</b>	18.3	4.5	3.3	21.3	15.2	16.3
<b>10 Transport equipment</b>	16.3	2.3	14.5	8.1	7.7	6.9
<b>11 Furniture; other manufactured goods n.e.c.</b>	2.7	1.0	1.8	3.3	1.4	1.1
<b>12 Non-energy mining and quarrying</b>	1.3	3.5	0.3	2.5	15.6	3.0
<b>13 Energy products, steam and hot water</b>	5.2	29.0	24.0	25.7	6.7	35.2

Source: Eurostat (Comext)